

**Environmental Assessment
for the
Construction of the Joint Use Facility
St Clair County
Scott Air Force Base, Illinois**



**Prepared By:
375th Civil Engineering Squadron
Environmental Management Flight
Scott Air Force Base, Illinois 62225-5035**

May 2006

Report Documentation Page			<i>Form Approved OMB No. 0704-0188</i>	
<p>Public reporting burden for the collection of information is estimated to average 1 hour per response, including the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information. Send comments regarding this burden estimate or any other aspect of this collection of information, including suggestions for reducing this burden, to Washington Headquarters Services, Directorate for Information Operations and Reports, 1215 Jefferson Davis Highway, Suite 1204, Arlington VA 22202-4302. Respondents should be aware that notwithstanding any other provision of law, no person shall be subject to a penalty for failing to comply with a collection of information if it does not display a currently valid OMB control number.</p>				
1. REPORT DATE MAY 2006	2. REPORT TYPE	3. DATES COVERED 00-00-2006 to 00-00-2006		
4. TITLE AND SUBTITLE Environmental Assessment for Construction of the Joint Use Facility St Clair County Scott Air Force Base, Illinois			5a. CONTRACT NUMBER	
			5b. GRANT NUMBER	
			5c. PROGRAM ELEMENT NUMBER	
6. AUTHOR(S)			5d. PROJECT NUMBER	
			5e. TASK NUMBER	
			5f. WORK UNIT NUMBER	
7. PERFORMING ORGANIZATION NAME(S) AND ADDRESS(ES) 375th Civil Engineer Squadron ,Environmental Management Flight,Scott AFB,IL,62225-5035			8. PERFORMING ORGANIZATION REPORT NUMBER	
9. SPONSORING/MONITORING AGENCY NAME(S) AND ADDRESS(ES)			10. SPONSOR/MONITOR'S ACRONYM(S)	
			11. SPONSOR/MONITOR'S REPORT NUMBER(S)	
12. DISTRIBUTION/AVAILABILITY STATEMENT Approved for public release; distribution unlimited				
13. SUPPLEMENTARY NOTES				
14. ABSTRACT				
15. SUBJECT TERMS				
16. SECURITY CLASSIFICATION OF:			17. LIMITATION OF ABSTRACT Same as Report (SAR)	18. NUMBER OF PAGES 73
a. REPORT unclassified	b. ABSTRACT unclassified	c. THIS PAGE unclassified	19a. NAME OF RESPONSIBLE PERSON	

**FINDING OF NO SIGNIFICANT IMPACT TO
CONSTRUCT JOINT USE FACILITY
SCOTT AIR FORCE BASE, ILLINOIS**

Agency: United States Air Force, Headquarters, Air Mobility Command

Background: Pursuant to the President's CEQ regulations, {Title 40 Code of Federal Regulations (CFR) Parts 1500-1508}, the National Environmental Policy Act of 1969 {42 USC §4321, et seq.}, Air Force Instruction (AFI) 32-7061, and the Environmental Impact Analysis Process, as promulgated at 32 CFR Part 989, the U.S. Air Force conducted an Environmental Assessment (EA) of the potential consequences associated with the construction of a new dormitory at Scott AFB, IL. The EA considered all potential natural resources, environmental, and cultural impacts of the construction and demolition project (hereinafter, "Proposed Action"), both as solitary actions and in conjunction with other proposed activities. This Finding of No Significant Impact (FONSI) summarizes the results of this EA and provides the U.S. Air Force's rationale for the Proposed Action and No-Action Alternative.

PROPOSED ACTION: The proposed action includes the construction of a new joint use facility for use by the Air Mobility Command (AMC) and the United States Transportation Command (USTRANSCOM) as administrate space. The new building would be a three-story facility located near the intersection of Ward Drive and West Martin Street. Construction of the building would consolidate various AMC and USTRANSCOM functions and alleviate the current shortage of administrative space.

Alternatives: The alternatives to the Proposed Action are Alternative A, Alternative B and the No-Action. Alternatives A and Alternative B would have similar environmental impacts to the Proposed Action. Alternative C was selected as the Proposed Action due to the ability of the proposed design to best meet the project requirements in an economically feasible manner. Implementation of the No-Action Alternative would not consolidate AMC and USTRANSCOM functions. These two organizations would be required to continue to operate in a manner that is inefficient and could potentially impair the mission of both organizations.

Cultural and Historical Resources: The Proposed Action site is located outside of the Historic District at Scott AFB and is not located within any other cultural or historical resource area. Buildings 1899, 1900, 1910 or 1911 are not eligible for listing under the Natural Register of Historic Places.

No artifacts or historical objects are expected to be excavated during construction. In the unlikely event artifacts or historical objects are discovered, construction activities would cease until the Cultural Resources Specialist and Base Historian are notified and the appropriate action is accomplished.

Air Quality: Fugitive dust and construction vehicle exhaust would be generated during implementation of the Proposed Action. However, these emissions would not constitute a major source of air pollutants based on quantitative analyses of particulate matter and vehicle emissions generated by projects of similar size and scope. The estimated values of direct and indirect emissions are below the *de minimus* thresholds specified at 40 CFR 93.153(b)(1). Therefore, the

Proposed Action would not increase emissions over baseline emission levels. The Proposed Action would be in compliance with all relevant requirements and milestones contained in the Illinois State Implementation Plan; therefore, a conformity determination would not be necessary.

Hazardous Materials and Waste: The use of hazardous materials during demolition activities would be limited and generation of hazardous waste would not be anticipated from the Proposed Action. There would be no anticipated impact to human health or the environment during demolition activities or from activities associated with implementation of the Proposed Action.

Noise: Some noise impacts would occur during the implementation of the Proposed Action. The amount of noise generated from operational activities would be temporary and negligible.

Geology and Soils: The surface area would be disturbed by demolition and construction activities at the Proposed Action; however, this disturbance would not be a significant negative impact to soil or geological resources. Necessary measures and best management practices would be utilized to prevent soil erosion during and after demolition activities.

Water Resources: There would be no significant impacts to surface or ground water quality during demolition of the Proposed Action. Necessary measures and best management practices would be utilized to prevent sedimentation of surface water resources.

Transportation Systems: Many of the intersections surrounding the site of the Proposed Action have existing problems with traffic congestion and movement. Implementation of the Proposed Action and specifically the closing of West Martin Street would result in additional impairment to traffic movement. Intersections that would be affected by the Proposed Action include Ward Drive and West Winters, Ward Drive and West Birchard, Scott Drive and West Winters and Scott Drive and West Birchard.

Occupational Safety and Health: If the Proposed Action is implemented, no unfavorable impacts to occupational health and safety are projected.

Biological Resources: No biological resources, including endangered or threatened species, or rare fauna and flora inhabit the Proposed Action area. As such, no impacts are probable.

Environmental Justice: There would be no disproportionately high or adverse impact on minority or low-income populations as a result of the Proposed Action.

Indirect and Cumulative Impacts: No impacts are anticipated from site-specific, direct, indirect, or cumulative impacts associated with the Proposed Action.

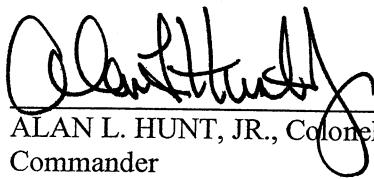
Relationship Between Short-term Uses and Enhancement of Long-Term Productivity: Implementation of the Proposed Action is not anticipated to impact short-term or long-term productivity.

Environmental Assessment for Construction of the Joint Use Facility (JUF)

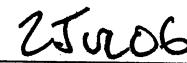
Irreversible and Irretrievable Commitment of Resources: There would be minor irreversible and irretrievable commitment of resources if the Proposed Action were selected. Military funds would be permanently expended.

Unavoidable Adverse Impacts: There would be no major unavoidable adverse impacts associated with the Proposed Action.

FINDING OF NO SIGNIFICANT IMPACT: Based upon my review of the facts and analyses contained in the attached Environmental Assessment for the Construction of the Joint Use Facility dated ___, 2006, I conclude that implementation of any of the Alternatives would not have a significant impact, either by itself or cumulatively with other projects at Scott AFB. Accordingly, the requirements of NEPA, the CEQ regulations, and 32 CFR 989 are fulfilled and an Environmental Impact Statement is not required. The signing of this Finding of No Significant Impact completes the environmental impact analysis process under Air Force Regulations.



ALAN L. HUNT, JR., Colonel, USAF
Commander



DATE

Attachment:
Environmental Assessment

FINAL
Environmental Assessment
for the
Joint Use Agreement
St. Clair County
Scott Air Force Base, Illinois



Prepared By:
375th Civil Engineering Squadron
Environmental Management Flight
Scott Air Force Base, Illinois 62225-5035

August 2005

TABLE OF CONTENTS

SECTION		PAGE
EXECUTIVE SUMMARY		ES-1
1.0	PURPOSE AND NEED FOR THE PROPOSED ACTION	1-1
1.1	INTRODUCTION	1-1
1.2	NEED FOR ACTION	1-1
1.2.1	Elimination of the Existing Scott AFB East Radar Traffic Pattern	1-1
1.2.2	Selection of the East Runway (14L/32R) by ATC and Military Pilots	1-1
1.2.3	Addition of the KC-135 to Scott AFB	1-3
1.2.4	C-21 Mission Requirements	1-3
1.3	OBJECTIVE	1-4
1.4	SCOPE OF THE EA	1-4
1.5	DECISION(S) THAT MUST BE MADE	1-4
1.6	APPLICABLE REGULATORY REQUIREMENTS AND REQUIRED COORDINATION	1-5
2.0	DESCRIPTION OF THE PROPOSED ACTION AND ALTERNATIVES.....	2-1
2.1	INTRODUCTION	2-1
2.2	SELECTION CRITERIA FOR ALTERNATIVES	2-1
2.3	DESCRIPTION OF PROPOSED ALTERNATIVES	2-1
2.4	DESCRIPTION OF PAST AND REASONABLY FORESEEABLE FUTURE ACTIONS RELEVANT TO CUMULATIVE IMPACTS	2-2
2.5	IDENTIFICATION OF PROPOSED ACTION	2-2
3.0	AFFECTED ENVIRONMENT	3-1
3.1	INTRODUCTION	3-1
3.2	AIR QUALITY	3-1
3.2.1	Emissions Inventory.....	3-2
3.3	NOISE.....	3-3
3.3.1	Definition of Resource.....	3-3
3.3.2	Noise Levels and the Public.....	3-7
3.4	WASTES, HAZARDOUS MATERIALS, AND STORED FUELS	3-10
3.5	WATER RESOURCES	3-10
3.5.1	Surface Water Resources	3-10
3.5.2	Floodplains.....	3-10
3.5.3	Groundwater Resources	3-11
3.5.4	Water Use and Treatment	3-12
3.5.5	Wetlands	3-12
3.6	BIOLOGICAL RESOURCES	3-14
3.6.1	Wildlife	3-14
3.6.2	Aquatic Biota	3-14
3.6.3	Threatened and Endangered Species	3-14
3.6.4	Noise Exposure	3-15
3.7	SOCIOECONOMIC RESOURCES	3-15
3.8	CULTURAL RESOURCES	3-15

TABLE OF CONTENTS

<u>SECTION</u>		<u>PAGE</u>
3.9	LAND USE.....	3-16
3.9.1	Local Communities.....	3-16
3.9.2	Noise	3-16
3.10	AIRSPACE/AIRFIELD OPERATIONS AND SAFETY	3-18
3.10.1	Current Operations.....	3-18
3.10.2	Airspace Management	3-18
3.11	ENVIRONMENTAL MANAGEMENT, POLLUTION PREVENTION	3-19
3.12	GEOLOGY AND SOILS	3-19
3.13	ENVIRONMENTAL JUSTICE	3-19
3.14	INDIRECT AND CUMULATIVE IMPACTS	3-19
4.0	ENVIRONMENTAL CONSEQUENCES.....	4-1
4.1	INTRODUCTION	4-1
4.2	AIR QUALITY	4-2
4.2.1	Proposed Action and Alternative A	4-2
4.2.2	No-Action Alternative	4-2
4.3	NOISE.....	4-2
4.3.1	Methodology	4-2
4.3.2	Impacts	4-3
4.4	WASTES, HAZARDOUS MATERIALS, AND STORED FUELS	4-5
4.4.1	Proposed Action and Alternative A	4-5
4.4.2	No-Action Alternative	4-5
4.5	WATER RESOURCES	4-5
4.5.1	Proposed Action and Alternative A	4-5
4.5.2	No-Action Alternative	4-6
4.6	BIOLOGICAL RESOURCES	4-6
4.6.1	Proposed Action and Alternative A	4-6
4.6.2	No-Action Alternative	4-6
4.7	SOCIOECONOMIC RESOURCES	4-6
4.7.1	Proposed Action and Alternative A	4-6
4.7.2	No-Action Alternative	4-6
4.8	CULTURAL RESOURCES	4-6
4.8.1	Proposed Action and Alternative A	4-6
4.8.2	No-Action Alternative	4-6
4.9	LAND USE.....	4-7
4.9.1	Proposed Action and Alternative A	4-7
4.9.2	No-Action Alternative	4-7
4.10	AIRSPACE/AIRFIELD OPERATIONS AND SAFETY	4-7
4.10.1	Proposed Action and Alternative A	4-7
4.10.2	No-Action Alternative	4-7
4.11	ENVIRONMENTAL MANAGEMENT, POLLUTION PREVENTION	4-8
4.11.1	Proposed Action and Alternative A	4-8
4.11.2	No-Action Alternative	4-8
4.12	GEOLOGY AND SOILS	4-8

TABLE OF CONTENTS

<u>SECTION</u>		<u>PAGE</u>
	4.12.1 Proposed Action and Alternative A	4-8
	4.12.2 No-Action Alternative	4-8
4.13	ENVIRONMENTAL JUSTICE	4-8
	4.13.1 Proposed Action and Alternative A	4-8
	4.13.2 No-Action Alternative	4-8
4.14	INDIRECT AND CUMULATIVE IMPACTS	4-8
	4.14.1 Proposed Action and Alternative A	4-8
	4.14.2 No-Action Alternative	4-9
4.15	UNAVOIDABLE ADVERSE IMPACTS.....	4-9
	4.15.1 Proposed Action and Alternative A	4-9
	4.15.2 No-Action Alternative	4-9
4.16	SUMMARY TABLE OF ENVIRONMENTAL CONSEQUENCES.....	4-9
5.0	REFERENCES.....	5-1
6.0	LIST OF PREPARERS.....	6-1
7.0	PERSONS CONTACTED	7-1

LIST OF TABLES

<u>NUMBER</u>		<u>PAGE</u>
Table 3-1	Comparison of Air Quality Measurements in St. Clair County (East St. Louis Station) with Federal Standards	3-2
Table 3-2	Air Pollutant Emissions Inventory for Scott AFB in 1998	3-3
Table 3-3	Representative Maximum Sound Levels	3-5
Table 3-4	Representative Sound Exposure Levels	3-5
Table 3-5	Percentage of Population Highly Annoyed by Elevated Noise Levels	3-7
Table 3-6	2001 Average Daily Operations at Scott AFB/MidAmerica Airport	3-8
Table 3-7	Land Area Exposed to Indicated Sound Levels	3-8
Table 4-1	Definitions of Environmental Consequences	4-1
Table 4-2	2004 Average Daily Operations at Scott AFB/MidAmerica Airport	4-4
Table 4-3	Change in Land Area Exposed to Indicated Sound Levels	4-4
Table 4-4	Comparison of Environmental Consequences	4-9

LIST OF FIGURES AND MAPS

<u>NUMBER</u>		<u>PAGE</u>
Figure 1-1	Project Location	1-2
Figure 3-1	Scott/MAA Noise Contours	3-9
Figure 3-2	Wetlands and Floodplains	3-13
Figure 3-3	Archeological Potential at Scott Air Force Base	3-17

LIST OF APPENDICES

A	Air Force AF 813 Form
B	Overview Map
C	Comments

LIST OF ABBREVIATIONS AND ACRONYMS

AEOZ	Airport Environs Overlay Zone
AFB	Air Force Base
AFI	Air Force Instruction
AFMAN	Air Force Manuals
AFRC	Air Force Reserve Command
AICUZ	Air Installation Compatible Use Zone
AMC	Air Mobility Command
ANG	Air National Guard
ANSI	American National Standards Institute
APZ	Accident Potential Zone
AQCR	Air Quality Control Region
ARTCC	Air Route Traffic Control Centers
ARW	Air Refueling Wing
ATC	air traffic control
AW	air wing
BGP	Base General Plan
CAA	Clean Air Act
CAAA	Clean Air Act Amendments
CEQ	Council on Environmental Quality
CES/CEV	Civil Engineering Squadron/Civil Environmental Flight
CFR	Code of Federal Regulation
CO	Carbon monoxide
CZ	clear zone
dB	decibels
dBA	A-weighted decibels
DO	Director of Operations
DoDI	Department of Defense Instruction
DOT	Department of Transportation
EA	Environmental Assessment
EIAP	Environmental Impact Analysis Process
EIS	Environmental Impact Statement
EM	Engineer Manual
EO	Executive Order
EPC	Environmental Protection Committee
EPCRA	Emergency Planning and Community Right to Know Act
FAA	Federal Aviation Administration
FEMA	Federal Emergency Management Agency
FICON	Federal Interagency on Noise
FICUN	Federal Interagency Committee on Urban Noise
FIP	Federal Implementation Plan
FONSI	Finding of No Significant Impact
gpm	gallons per minute
HUD	Housing and Urban Development
Hz	Hertz

LIST OF ABBREVIATIONS AND ACRONYMS (Cont'd)

IEPA	Illinois Environmental Protection Agency
IESPB	Illinois Endangered Species Protection Board
IRP	Installation Restoration Program
JUA	Joint Usage Agreement
L _{dn}	Day-Night Average sound level
L _{max}	maximum sound level
mgd	million gallons per day
NAAQS	National Ambient Air Quality Standard
NEPA	National Environmental Policy Act
NO ₂	nitrogen dioxide
NRCS	Natural Resources Conservation Service
NRHP	National Register of Historic Places
O ₃	ozone
OSHA	Occupational Safety and Health Administration
OSS	Operations Support Squadron
P2	pollution prevention
Pb	lead
PM _{2.5}	particulate matter 2.5 microns
PM ₁₀	particulate matter 10 microns
RCRA	Resource Conservation and Recovery Act
ROD	Record of Decision
ROI	Region of Influence
SEL	Sound Exposure Level
SHPO	State Historic Preservation Office
SIP	State Implementation Plan
SMSA	St. Louis Metropolitan Statistical Area
SO ₂	sulfur dioxide
TO	Technical Orders
USAF	United States Air Force
USEPA	United States Environmental Protection Agency
USTC	United States Transportation Command
VA	Veteran's Administration

EXECUTIVE SUMMARY

In 1991, St. Clair County and the U.S. Air Force (USAF) signed the Scott Air Force Base (Scott AFB) Joint Use Agreement (JUA). The 1991 JUA included a number of construction and facility relocation projects and some changes in military operations. Included with the original Proposed Action was the construction of a new 10,000-foot "East" runway (14L/32R) at MidAmerica Airport, parallel to the existing 8001-foot "West" runway (14R/32L) at Scott AFB, with a 7,000-foot separation between the runways. The new MidAmerica Airport civil runway (14L/32R) was to be used primarily for civil operations, and the existing, military runway (14R/32L) would be used primarily for military operations. The runways would be joined by a new connecting taxiway, Taxiway G, over Silver Creek. A new passenger terminal, freight handling facility, taxiways and ancillary facilities were constructed to support the new civil operations. New and relocated facilities were also built at the existing military airfield. See Appendix B for an overview map.

As part of the 1991 JUA process, the USAF prepared an Environmental Impact Statement (EIS) to determine the potential environmental impacts associated with implementation of the Proposed Action (USAF, 1991). The 1991 Final EIS for joint military-civilian use of Scott AFB, Illinois and associated Record of Decision (ROD) concluded that implementation of the Proposed Action would not cause significant environmental impacts and that the project should proceed as planned.

The 1991 JUA was signed to be effective for 50 years and would be renewed in the year 2041 with an option to renew for a similar term. The renewal of the 1991 JUA would require the preparation of an Environmental Assessment (EA) to ensure that continued military and civil operations under the Renewed JUA would not adversely impact the natural, cultural or socioeconomic environments of Scott AFB and surrounding areas.

This EA evaluates the potential impacts of implementing the Proposed Action, renewing the JUA, for the joint military-civil use of Scott AFB in St. Clair County, Illinois. The base is located approximately 20 miles east of St. Louis, Missouri. The 1991 JUA provided additional civil airport capacity for the southwestern Illinois area. This EA assesses the operational impacts associated with implementation of the Proposed Action at the base and surrounding areas. Major towns in the immediate vicinity are O'Fallon, Shiloh, Lebanon, Mascoutah, Belleville, and Fairview Heights.

Proponents of the JUA renewal include the Illinois Department of Transportation, Division of Aeronautics, St. Clair County and the USAF. USAF approval is required to proceed with renewing the JUA. Part of the information that the USAF uses to reach decisions on such approvals is based on the environmental impact analysis process (EIAP) conducted during the preparation of this EA. The 375th Airlift Wing has prepared this EA as part of the EIAP process.

The purpose of renewing the JUA at Scott AFB is for the 375th Airlift Wing and St. Clair County to operate both runways under an approved modified agreement that more accurately reflects the current operations of both the military and civilian runways at the Joint Use Airport and does not include the construction provisions of the 1991 JUA.

This EA has been prepared in accordance with the *National Environmental Policy Act of 1969* (NEPA), the Council on Environmental Quality (CEQ) regulations [40 Code of Federal Regulations, sections 1500-1508], and Air Force Instruction (AFI) 32-7061, the EIAP, as promulgated at 32 CFR 989, and AFI 32-7063, Air Installation Compatible Use Zone (AICUZ). This EA focuses on specific issues and concerns of the Proposed Action and the alternatives that could affect the environment of Scott AFB and the surrounding properties. The range of alternatives includes taking No-Action, implementing the Proposed Action, or implementing Alternative A.

1.0 PURPOSE AND NEED FOR THE PROPOSED ACTION

1.1 INTRODUCTION

The Joint Use Agreement (JUA) between the U.S. Air Force (USAF) and St. Clair County was signed in 1991. The 1991 JUA focused on construction of the new runway (14L/32R) parallel to the existing runway (14R/32L) and construction of associated facilities (Figure 1-1). Because construction is complete and no further construction is anticipated as part of this renewal, many of the construction provisions in the original agreement are no longer necessary. The operational information contained in the 1991 JUA was based on the existing operational levels at Scott Air Force Base (AFB) and projected operational levels at the MidAmerica Airport. Since 1991, both military and civilian flight operations have changed in number and type and therefore the existing agreement no longer accurately reflects the current operational levels at the military or civilian runways.

1.2 NEED FOR ACTION

The primary need for implementation of the Proposed Action is to renew the 1991 JUA by including provisions that more effectively manage the current operational needs of the military and St. Clair County. The 1991 JUA directed that both parties would permit reciprocal operations on their runway as required by mission needs or runway availability but those operations were not expected to be substantial. In addition, the 1991 JUA directed that military air traffic operations would be confined primarily to the West Scott AFB runway (14R/32L) and civilian traffic be confined primarily to the East (MidAmerica Airport) runway (14L/32R). Although the present operations concept remains the same, daily operation of military aircraft on the MidAmerica Airport runway (14L/32R) has been dominant and can, at times reach “substantial” levels. The dominant use of the MidAmerica Airport runway (14L/32R) by military aircraft is due to a number of factors including the elimination of the existing Scott AFB East radar traffic pattern, selection of the East runway (14L/32R) by Air Traffic Control (ATC) and by military pilots, the addition of the KC-135 to the Scott AFB mission, and C-21 mission requirements. Each of these factors is explained in more detail below.

1.2.1 Elimination of the Existing Scott AFB East Radar Traffic Pattern

Prior to the construction of the MidAmerica Airport, air traffic destined for transition or full stops at Scott AFB primarily used an East radar traffic pattern that avoided conflicts with radar traffic patterns and arrival corridors used by the Lambert St. Louis International Airport. Construction of the new MidAmerica Airport forced the creation of a new radar traffic pattern farther to the east.

1.2.2 Selection of the East Runway (14L/32R) by ATC and Military Pilots

The premise of the 1991 JUA concerning traffic prioritization read “Air Traffic Control services will be provided by the USAF in accordance with FAA Order 7110.65 and Air Force Instruction 13-203,” “ATC will operate the airport as a single entity,” and “no attempt will be made by ATC to segregate users of the airport into USAF or civil airport operations.” There is currently no local provision that directs Scott-based pilots to minimize their operations on

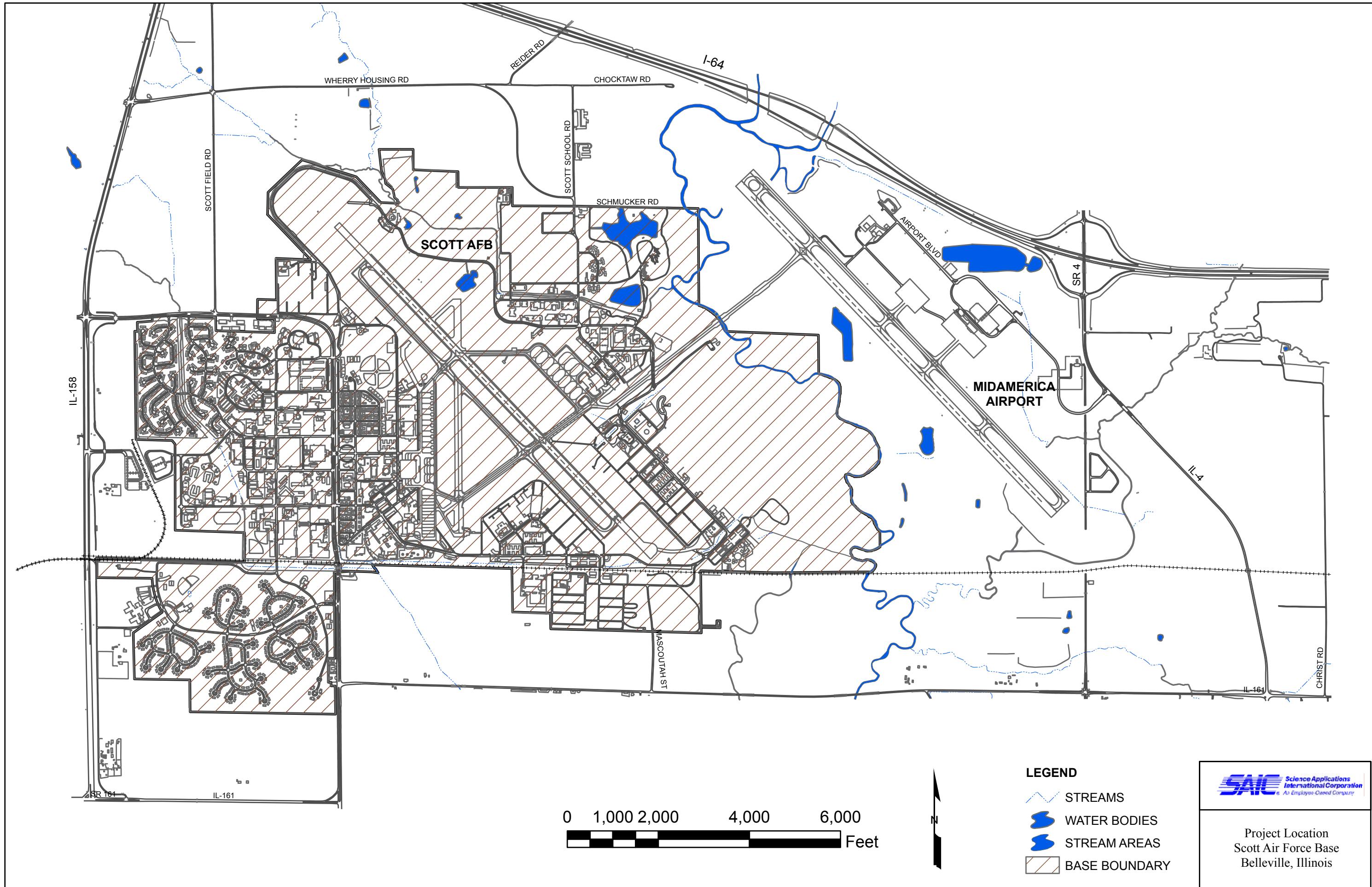


Figure 1-1. Project Location

the East runway (14L/32R) or to restrict transition or multiple approaches to the West runway (14R/32L). Practical considerations require that controllers fully use, train for, and hone their skills for traffic operations on parallel runways operated as a single Joint Use Airport. By the same token, pilots seeking to use a longer runway (over a shorter one) and desiring to vary the availability of approaches during missions involving multiple runway operations will naturally seek the East runway (14L/32R). On the other hand, segregation of military and civilian air traffic on the respective airfields would have resulted in nearly 33,000 operations at Scott and only 4,000 at MidAmerica Airport in calendar year 2002 (AFCEE 2004). This distribution of traffic would limit the training opportunities for local air traffic controllers and pilots.

1.2.3 Addition of the KC-135 to Scott AFB

When the 1991 JUA was signed, relocation of the 126 Air Refueling Wing (ARW) from Chicago's O'Hare Airport to MidAmerica Airport had yet to be realized. The planned MidAmerica Airport runway was extended an additional 2,000 feet (to 10,000 feet) with the intention of operating the heavy tankers on the new runway. Since adding the KC-135 to the Scott/MidAmerica military mission, routine use by the newly domiciled tanker unit has become a common occurrence. For safety considerations, large, mission-dictated fuel loads require the longer runway for takeoffs and landings. This was readily apparent during the 126 ARW alert commitment and air refueling support for Operation ENDURING FREEDOM and NOBLE EAGLE. Additionally, pilots generally prefer a longer runway during periods of reduced visibility, low ceilings, and wet or icy runways. These operational factors, again, elevate the use of the longer East runway over that of the West runway. Further, with respect to encroachment, the continued use of the MidAmerica Airport best preserves the operational readiness of the Joint Use Airport under changing missions and requirements. It is expected that daily KC-135 operations will remain static with approximately one mission and two local trainings per day. In addition, KC-135 operations may use the longer runway at MidAmerica Airport almost exclusively due to operational necessity.

1.2.4 C-21 Mission Requirements

It is anticipated that daily C-21 operations will continue at an equivalent rate to those operations conducted in both calendar years 2001 and 2002. C-21 transition training, as well as takeoff and landing operations impacted by bird population/strike hazard, runway condition readings, and takeoff/landing temperatures will require use of a longer runway at MidAmerica Airport.

Given the concerns of the Federal Aviation Administration (FAA) for traffic separation and encroachment issues in the local communities, and since there are no feasible plans for altering the local radar pattern at the Joint Use Airport, the 375th Airlift Wing foresees continued, long-term use of both the Scott AFB and MidAmerica Airport runways for military C-9, C-21, and KC-135 operations.

1.3 OBJECTIVE

The objective of this Environmental Assessment (EA) is to evaluate the potential impacts associated with the implementation of the Proposed Action, Alternative A, and the No-Action Alternative and to determine the significance of those impacts. If the potential impacts are not considered significant, a Finding of No Significant Impact (FONSI) will be prepared.

1.4 SCOPE OF THE EA

This EA identifies, describes, and evaluates the potential environmental impacts associated with implementation of the Proposed Action, Alternative A, and the No-Action Alternative. Furthermore, this document includes an analysis of the impacts of the Proposed Action, Alternative A, and the No-Action Alternative as they relate to the following environmental and socioeconomic programs:

- Air Quality;
- Noise;
- Wastes, Hazardous Materials and Stored Fuel;
- Land Use;
- Water Resources;
- Floodplains and Wetlands;
- Biological Resources Management;
- Environmental Management;
- Geology and Soils;
- Socioeconomics;
- Cultural Resources;
- Airspace/Airfield Operations and Safety;
- Pollution Prevention;
- Environmental Justice.

1.5 DECISION(S) THAT MUST BE MADE

The decision to be made will include selecting one of the alternatives described as follows:

Proposed Action: The Proposed Action consists of implementing the renewed JUA that contains modified provisions to more effectively manage the existing operational conditions at Scott AFB and MidAmerica Airport.

Alternative A: Implementation of this alternative would result in the 1991 JUA provisions not being modified. Although the 1991 agreement allows for reciprocal operations at either runway, it does not contain provisions for substantial military operations at MidAmerica Airport, and therefore does not accurately reflect or effectively manage current operations.

No-Action Alternative: Implementation of this alternative would require operation of the Scott AFB and MidAmerica Airport runways under the 1991 JUA. Although this agreement allows

for reciprocal operations at either runway, it does not contain provisions for substantial military operations at MidAmerica Airport.

1.6 APPLICABLE REGULATORY REQUIREMENTS AND REQUIRED COORDINATION

Following is a list of Air Force Instructions (AFI), Executive Orders (EO), Acts, Air Force Manuals (AFMAN), Engineer Manual (EM), Code of Federal Regulations (CFR), Department of Defense Instructions (DoDI), and Technical Orders (TO) that are applicable to the Proposed Action.

- *National Environmental Policy Act*, Public Law 91-190, 42 U.S.C. 4321-4347, January 1, 1970;
- Council on Environmental Quality (CEQ) regulations, 40 CFR parts 1500 through 1505;
- EO 11988 and 11990, Floodplain Management and Protection of Wetlands;
- EO 12898, Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations;
- *Clean Air Act* (1970, Amended, 1977 and 1990);
- Corps of Engineers Manual, EM 385-1-1, General Safety Requirements;
- 32 CFR Part 989, Environmental Impact Analysis Process;
- AFI 32-7062, Air Force Comprehensive Planning;
- AFI 32-7064, Natural Resources Management;
- AFI 32-7065, Cultural Resources Management;
- DoDI 4165.57 and AFI 32-7063, AICUZ Programs;
- 29 CFR, Occupational Safety and Health Standards;
- UFC 3-260-01, Unified Facilities Criteria
- AFMAN 32-1123, Unified Facilities Guide;
- AF Handbook 32-1084, Civil Engineer Facility Requirements;
- 40 CFR 93.153, Air Conformity Determination;
- *Resource Conservation Recovery Act* (1970).

- AFI 32-7063, Air Installation Compatible Use Zone (AICUZ) Program.
- AF Handbook 32-7084, Air Installation Compatible Use Zone (AICUZ) Program Manager's Guide
- Scott AFB General Plan, 2002.

2.0 DESCRIPTION OF THE PROPOSED ACTION AND ALTERNATIVES

2.1 INTRODUCTION

This section describes the selection criteria for each of the alternatives, details of the Proposed Action, Alternative A, and the No-Action Alternative, and past and reasonably foreseeable future actions relevant to cumulative impacts.

2.2 SELECTION CRITERIA FOR ALTERNATIVES

- 1) Alternative must minimize impacts to the natural, cultural and socioeconomic environments of Scott AFB and surrounding areas.
- 2) Implementation of the alternative must not cause any substantial net increases in day or night noise levels.
- 3) Implementation of the alternative must not cause any substantial net increases in air pollutant emissions.
- 4) Implementation of the alternative must meet both military and civilian mission and operational requirements.

Alternatives considered for this EA include the Proposed Action, Alternative A, and No-Action.

The Proposed Action was selected based upon the ability to meet the selection criteria listed above. Implementation of the action is consistent with the 1991 JUA and compatible with the May 2002 Scott AFB Base General Plan (BGP). The BGP illustrates Scott AFB's present and future capability to support its mission. The BGP is a stand-alone document responding to the USAF's commitments to planning for future development and protecting the environment, as prescribed in the AFI 32-7062, Air Force Comprehensive Planning. The Scott AFB BGP is currently being updated.

2.3 DESCRIPTION OF PROPOSED ALTERNATIVES

No-Action Alternative

This alternative consists of not renewing the outdated and obsolete provisions of the 1991 JUA between the USAF and St. Clair County.

Alternative A

Implementation of Alternative A includes discontinuing military use of the MidAmerica Airport runway and restricting all military aircraft to the Scott AFB runway.

2.4 DESCRIPTION OF PAST AND REASONABLY FORESEEABLE FUTURE ACTIONS RELEVANT TO CUMULATIVE IMPACTS

There are no past or reasonably foreseeable future actions, which are anticipated to cause cumulative impacts.

2.5 IDENTIFICATION OF PROPOSED ACTION

The preferred alternative, referred to as the Proposed Action, includes implementing a revised JUA that more effectively manages the current and future operational conditions at Scott AFB and MidAmerica Airport. This JUA would take into account the relatively equal distribution of military operations between Scott AFB and MidAmerica Airport.

3.0 AFFECTED ENVIRONMENT

3.1 INTRODUCTION

This section describes the environmental components that could be affected by the implementation and operation of the Proposed Action, Alternative A, and the No-Action Alternative. Section 3.0 serves as a baseline for evaluating the environmental status of the Proposed Action, Alternative A, and the No-Action Alternative. Additionally, this EA addresses the following environmental issues:

- Air Quality;
- Noise;
- Wastes, Hazardous Materials, and Stored Fuels;
- Water Resources, to include Floodplains and Wetlands;
- Biological Resources;
- Socioeconomic Resources;
- Cultural Resources;
- Land Use;
- Airspace/Airfield Operations and Safety;
- Environmental Management, Pollution Prevention;
- Geology and Soils;
- Environmental Justice;
- Indirect and Cumulative Impacts.

The aforementioned issues are not listed in order of significance.

3.2 AIR QUALITY

The Federal *Clean Air Act* Amendments (CAA) of 1977 required the adoption of air quality standards. These were established to protect public health, safety and welfare from known or anticipated effects of sulfur dioxide (SO₂), particulates (PM₁₀, 10 micron and smaller), carbon monoxide (CO), nitrogen dioxide (NO₂), ozone (O₃), and lead (Pb).

The CAAA of 1977 required all states to submit to the U.S. Environmental Protection Agency (USEPA) a list identifying those air quality control regions, or portions thereof, which meet or exceed the National Ambient Air Quality Standards (NAAQS) or cannot be classified because of insufficient data. Portions of air quality control regions that are shown, by monitored data or air quality modeling, to exceed the NAAQS for any criteria pollutant are designated "non-attainment" areas for that pollutant.

Scott AFB/MidAmerica Airport occurs within the Metropolitan St. Louis Interstate Air Quality Control Region (AQCR #070). The state air quality-monitoring site closest to Scott AFB is the East St. Louis monitoring station, located in St. Clair County approximately 18 miles west of the base. Table 3-1 compares the applicable federal ambient air quality standards with the East St. Louis monitoring site maximum pollutant concentrations for the 3-year period 2001-2003 (USEPA, 2004).

Table 3-1 Comparison of Air Quality Measurements in St. Clair County (East St. Louis Station) with Federal Standards

		Federal Ambient Air Quality Standards (ppm)¹	Maximum Concentration (ppm)¹		
			2001	2002	2003
Pollutant	Averaging Period	Primary			
Carbon monoxide	1 hour	35	4.2	3.5	4.4
	8-hour	9	3.0	2.8	3.2
Nitrogen oxide	Annual	0.053	0.019	0.017	0.016
Particulate Matter (PM₁₀)	24-hour	150 μm^3	71 μm^3	107 μm^3	70 μm^3
	Annual	50 μm^3	30 μm^3	30 μm^3	34 μm^3
Lead	Quarterly mean	1.5 μm^3	0.065 μm^3	0.0325 μm^3	0.04 μm^3
Sulfur dioxide	3-hour	0.5	0.235	0.190	0.168
	24 hour	0.14	0.081	0.056	0.049
	Annual	0.030	0.008	0.006	0.005
Ozone²	1-hour	0.120	0.110	0.117	0.134
	8-hour	0.080	0.082	0.103	0.111

Notes:

¹Unless otherwise stated.

²For the 1-hour standard there were no exceedances in 2001 and 2002 and two exceedances in 2003 from this monitor. For the 8-hour standard, there were no exceedances in 2001, nine exceedances in 2002 and three exceedances in 2003 from this monitor.

Source: Scott AFB 2004.

This AQCR is designated as a moderate non-attainment area for O₃, a limited maintenance area for CO, and either as attainment or no designation for the remaining pollutants. In December 2004, the USEPA designated St. Clair County as a nonattainment area for the PM_{2.5}, fine particulate matter (less than 2.5 microns in diameter) standard.

3.2.1 Emissions Inventory

This section presents information on air pollutant emissions from activities at Scott AFB. The Scott AFB emissions are also compared with ozone-producing pollutant emissions from the Illinois portion of the St. Louis Metropolitan Statistical Area (SMSA) of AQCR #070. The SMSA emission inventory accounts for emission sources in St. Clair County, as well as emission sources from four other counties.

Table 3-2 summarizes annual emissions by source category for calendar year 1998. This table was developed from an emission inventory compiled by Scott AFB (Dods, 2004). Emissions, reported in tons per year, are organized into 18 categories: external combustion sources, stationary internal combustion engines, medical waste incineration, storage tanks, fuel transfers, equipment leaks, spray painting booths, solvent parts washers, miscellaneous product usage, fire fighter training, fuel cell maintenance, landfills, non-destructive inspection, ordinance detonation, pesticide application, small arms range, wet cooling towers, and woodworking.

Table 3-2 Air Pollutant Emissions Inventory for Scott AFB in 1998 (tons/year)

Source Category	Carbon Monoxide	Nitrogen Oxides	Particulate Matter	Sulfur Oxides	VOCs
External Combustion Sources	2.24	2.82	0.216	0.017	0.156
Stationary Internal Combustion Engines	1.12	4.98	0.186	0.154	0.210
Medical Waste Incineration	0.100	0.120	0.103	0.073	0.010
Storage Tanks	--	--	--	--	3.32
Fuel Transfers	--	--	--	--	6.52
Equipment Leaks	--	--	0.003	--	0.134
Spray Painting Booths	--	--	--	--	0.232
Solvent Parts Washers	--	--	--	--	0.262
Miscellaneous Product Usage	--	--	--	--	0.374
Fire Fighter Training	0.031	0.112	0.019	--	0.048
Fuel Cell Maintenance	--	--	--	--	0.013
Landfills	0.147	--	--	--	1.90
Non-Destructive Inspection	--	--	--	--	<0.001
Ordnance Detonation	<0.001	<0.001	<0.001	--	<0.001
Pesticide Application	--	--	--	--	0.116
Small Arms Range	0.010	--	--	--	--
Wet Cooling Towers	--	--	0.449	--	--
Woodworking	--	--	0.770	--	--

Source: Scott AFB 2004

3.3 NOISE

3.3.1 Definition of Resource

Noise is considered to be unwanted sound that interferes with normal activities or otherwise diminishes the quality of the environment. It may be intermittent or continuous, steady or impulsive, stationary or transient. Stationary sources are normally related to specific land uses, (e.g., housing tracts or industrial plants). Transient noise sources move through the environment, either along relatively established paths (e.g., highways, railroads, and aircraft flight tracks around airports), or randomly. There is wide diversity in responses to noise that not only vary according to the type of noise and the characteristics of the sound source, but also according to the sensitivity and expectations of the receptor, the time of day, and the distance between the noise source (e.g., an aircraft) and the receptor (e.g., a person or animal).

The physical characteristics of noise, or sound, include its intensity, frequency, and duration. Sound is created by acoustic energy, which produces minute pressure waves that travel through a medium, like air, and are sensed by the ear drum. This may be likened to the ripples in water that would be produced when a stone is dropped into it. As the acoustic energy increases, the intensity or amplitude of these pressure waves increase, and the ear senses louder noise. The unit used to measure the intensity of sound is the decibel (dB).

Sound intensity varies widely (from a soft whisper to a jet engine) and is measured on a logarithmic scale to accommodate this wide range. The logarithm, and its use, is nothing more than a mathematical tool that simplifies dealing with very large and very small numbers. For example, the logarithm of the number 1,000,000 is 6, and the logarithm of the number 0.000001 is -6 (minus 6). Obviously, as more zeros are added before or after the decimal point, converting these numbers to their logarithms greatly simplifies calculations that use these numbers.

The frequency of sound is measured in cycles per second, or hertz (Hz). This measurement reflects the number of times per second the air vibrates from the acoustic energy. Low frequency sounds are heard as rumbles or roars, and high frequency sounds are heard as screeches. Sound measurement is further refined through the use of “A-weighting.” The normal human ear can detect sounds that range in frequency from about 20 Hz to 15,000 Hz. However, all sounds throughout this range are not heard equally well. Therefore, through internal electronic circuitry, some sound meters are calibrated to emphasize frequencies in the 1,000 to 4,000 Hz range. The human ear is most sensitive to frequencies in this range, and sounds measured with these instruments are termed “A-weighted”, and are shown in terms of A-weighted decibels (dBA).

The duration of a noise event and the number of times that noise events occur are also important considerations in assessing noise impacts.

As a basis for comparison when noise levels are considered, it is useful to note that at distances of about three feet, noise from normal human speech ranges from 63 to 65 dB, operating kitchen appliances range from about 83 to 88 dB, and rock bands approach 110 dB.

The word “metric” is used to describe a standard of measurement. As used in environmental noise analysis, there are many different types of noise metrics. Each metric has a different physical meaning or interpretation and each metric was developed by researchers attempting to represent the effects of environmental noise.

The metrics supporting the assessment of noise from aircraft operations associated with the proposals assessed in this document are the Maximum Sound Level (L_{max}), the Sound Exposure Level (SEL), and Time-Averaged Cumulative Noise Metrics. Each metric represents a “tier” for quantifying the noise environment, and is briefly discussed below.

3.3.1.1 Maximum Sound Level

The L_{max} metric defines peak noise levels. L_{max} is the highest sound level measured during a single noise event (e.g., an aircraft overflight), and is the sound actually heard by a person on the ground. For an observer, the noise level starts at the ambient noise level, rises up to the maximum level as the aircraft flies closest to the observer, and returns to the ambient level as the aircraft recedes into the distance. L_{max} is important in judging a noise event’s interference with conversation, sleep, and other common activities.

This document considers noise from aircraft operating around airfields. Around airfields, the primary operational modes of aircraft are departures (take-offs) and arrivals (landings).

Table 3-3 shows L_{max} values at various distances associated with typical military and civilian aircraft operating at Scott AFB and MidAmerica Airport.

Table 3-3 Representative Maximum Sound Levels

Aircraft and Power Type	L _{max} Values (in dBA) At Varying Distances (In Feet)					
	500	1,000	2,000	3,000	5,000	10,000
KC-135 Takeoff	110.3	101.9	92.3	86.2	79.0	68.9
KC-135 Landing	108.6	100.3	90.1	82.6	71.7	58.1
B-727 Takeoff	112.8	106.0	98.8	94.2	88.0	78.7
B-727 Landing	86.6	79.4	71.9	67.1	60.8	51.1
Lear 35 Takeoff	96.6	89.4	81.6	76.5	69.7	59.0
Lear 35 Landing	81.9	74.3	66.1	60.8	54.0	44.0

Source: OMEGA108

3.3.1.2 Sound Exposure Level

L_{max} alone may not represent how intrusive an aircraft noise event is because it does not consider the length of time that the noise persists. The SEL metric combines intensity and duration into a single measure. It is important to note, however, that SEL does not directly represent the sound level heard at any given time, but rather provides a measure of the total exposure of the entire event. The SEL value represents all of the acoustic energy associated with the event, as though it was present for one second. Therefore, for sound events that last longer than one second, the SEL value will be higher than the L_{max} value. The SEL value is important because it is the value used to calculate other time-averaged noise metrics. Table 3-4 shows SEL values corresponding to the aircraft and power settings reflected in Table 3-3.

Table 3-4 Representative Sound Exposure Levels

Aircraft and Power Type	SEL Values (in dBA) At Varying Distances (In Feet)					
	500	1,000	2,000	3,000	5,000	10,000
KC-135 Takeoff	113.2	106.6	98.8	93.9	87.9	79.6
KC-135 Landing	110.6	104.1	95.7	89.2	79.7	67.8
B-727 Takeoff	117.0	112.1	106.7	103.1	98.3	90.8
B-727 Landing	92.1	86.8	81.1	77.3	72.3	64.5
Lear 35 Takeoff	102.5	97.1	91.1	87.1	81.6	72.7
Lear 35 Landing	87.6	81.8	75.4	71.2	65.7	57.5

Source: OMEGA108

3.3.1.3 Time-Averaged Cumulative Noise Metrics

The number of times noise events occur during given periods is also an important consideration in assessing noise impacts. The “cumulative” noise metric supporting the analysis of multiple time-varying noise events is the Day-Night Average Sound Level (L_{dn}).

3.3.1.3.1 Day-Night Average Sound Level

This metric sums the individual noise events and averages the resulting level over a specified length of time. Thus, it is a composite metric which considers the maximum

noise levels, the duration of the events, the number of events that occur, and the time of day during which they occur. This metric adds 10 dB to those events that occur between 10:00 P.M. and 7:00 A.M to account for the increased intrusiveness of noise events that occur at night when ambient noise levels are normally lower than during the day time. This cumulative metric does not represent the variations in the sound level heard. Nevertheless, it does provide an excellent measure for comparing environmental noise exposures when there are multiple noise events to be considered.

It should be noted that ambient background noise is not considered in the noise calculations that are presented below. There are two reasons for this. First, ambient background noise, even in wilderness areas, varies widely, depending on location and other conditions. For example, studies conducted in an open pine forest in the Sierra National Forest in California have measured up to a 10 dBA variance in sound levels simply due to an increase in wind velocity (Harrison, 1973). Therefore, assigning a value to background noise would be arbitrary. Secondly, and probably most important, is that it is reasonable to assume that ambient background noise in the project's Region of Influence (ROI) would have little or no effect on the calculated L_{dn} . The ROI for the noise assessments are the areas around Scott AFB and MidAmerica Airport that are exposed to aviation-related noise resulting from activities in the region. In calculating noise levels, louder sounds dominate the calculations, and overall, aircraft and other transportation-related noise would be expected to be the dominant noise sources characterizing the acoustic conditions in the region.

Using measured sound levels as a basis, the USAF developed several computer programs to calculate noise levels resulting from aircraft operations. Sound levels calculated by these programs have been extensively validated against measured data, and have been proven to be highly accurate.

In this document, the sound levels calculated for aircraft operations in an airfield environment are all L_{dn} . L_{dn} metrics are the preferred noise metrics of the Department of Housing and Urban Development (HUD), the Department of Transportation (DOT), the FAA, the USEPA, and the Veteran's Administration (VA).

Ignoring the night-time penalty for the moment, L_{dn} may be thought of as the continuous or cumulative A-weighted sound level which would be present if all of the variations in sound level which occur over the given period were smoothed out so as to contain the same total sound energy. While L_{dn} does provide a single measure of overall noise impact, it is fully recognized that it does not provide specific information on the number of noise events or the specific individual sound levels which occur. For example, an L_{dn} of 65 dB could result from a very few noisy events, or a large number of quieter events. Although it does not represent the sound level heard at any one particular time, it does represent the total sound exposure. Scientific studies and social surveys have found the L_{dn} to be the best measure to assess levels of community annoyance associated with all types of environmental noise. Therefore, its use is endorsed by the scientific community and governmental agencies such as the American National Standards Institute (ANSI)

USEPA; Federal Interagency Committee on Urban Noise (FICUN); Federal Interagency on Noise (FICON).

3.3.2 Noise Levels and the Public

Public annoyance is the most common concern associated with exposure to elevated noise levels. When subjected to L_{dn} levels of 65 dBA, approximately 12 percent of the persons exposed will be “highly annoyed” by the noise. At levels below 55 dBA, the percentage of annoyance is significantly lower (less than three percent), and at levels above 70 dBA, it is significantly higher (greater than 25 percent) (Finegold et al., 1994). Table 3-5 shows the percentage of the population expected to be highly annoyed at a range of noise levels.

Table 3-5 Percentage of Population Highly Annoyed by Elevated Noise Levels

Noise Exposure (L_{dn} in dBA)	Percent Highly Annoyed
< 65	< 12
65 – 70	12 – 21
70 – 75	22 – 36
75 – 80	37 – 53
80 – 85	54 – 70
> 85	> 71

Source: Finegold et al. 1994.

3.3.2.1 Aircraft Activity

The following terms are defined to provide a better understanding of how data are developed for input to the various noise models that are used to calculate noise.

Around an airfield, *aircraft operations* are categorized as takeoffs, landings, or closed patterns.(which could include activities referred to as touch-and-gos or low approaches). Each takeoff or landing constitutes one operation. A *closed pattern* occurs when the pilot of the aircraft approaches the runway as though planning to land, but then applies power to the aircraft and continues to fly as though taking off again. The pilot then flies a circular or rectangular track around the airfield, and again approaches for landing. In some cases the pilot may actually land on the runway before applying power, or in other cases the pilot simply approaches very close to the ground. In either event, since a closed pattern operation essentially consists of a landing and a takeoff, it is considered two operations.

Scott AFB and MidAmerica Airport are co-located aviation facilities located near Belleville, IL. Scott AFB and its associated runway is situated in the western portion of the complex; MidAmerica Airport is situated to the east. Under current conditions, the two facilities support military and civil aviation activity. Together, the two facilities support approximately 105 daily aviation operations. Considering all types of flight activities, a scenario representing an “average day’s” operations was developed. The operations considered include, arrivals (landings), departures (takeoffs), and closed patterns. The baseline flight operational data presented in this Section are derived from the 2001 AICUZ. Noise calculations consider the frequency of flight

operations, runway utilization, and the flight tracks and flight profiles flown by each aircraft. The 2001 numbers and types of representative operations considered are shown in Table 3-6.

Table 3-6 2001 Average Daily Operations at Scott AFB/MidAmerica Airport¹

Aircraft	Arrivals		Departures		Closed Patterns ²	
	Day	Night	Day	Night	Day	Night
KC-135	3.936	0.437	4.364	0.010	8.886	0.987
Other Based Military	8.111	0.585	8.610	0.087	0	0
Transient Military	5.548	0.043	5.548	0.043	0	0
Air Carrier / Air Taxi	2.854	0	2.854	0	0	0
General Aviation	5.973	0	5.963	0	15.138	0
Total	26.422	1.065	27.339	0.140	24.024	0.987

Notes: ¹ Daily operations are based on averages of annual operations; therefore, numbers do not round.

² Because closed patterns consist of a landing and a takeoff (two aviation operations), the 25.011 closed patterns shown equate to 50.022 aviation operations. These numbers are based on 292 flight days.

Source: USAF 2001.

These levels and types of activity are then combined with information on climatology, maintenance activities, and aircraft flight parameters, and processed through the USAF's BASEOPS/NOISEMAP (Moulton, 1990) computer models to calculate L_{dn} . Once noise levels are calculated, they are plotted on a background map in 5-decibel increments from 65 dBA to 85 dBA, as applicable. Noise contours associated with current activities at Scott AFB/MidAmerica Airport are shown in Figure 3-1. The land area (in acres) encompassed by each contour is shown in Table 3-7.

Table 3-7 Land Area Exposed To Indicated Sound Levels

Sound Level (L_{dn})	Acres of Land ¹
65 – 70	2,125.00
70 – 75	1,016.07
75 – 80	441.30
80 – 85	232.24
> 85	115.09

Notes: ¹Land areas exposed to indicated sound levels. Total area exposed to L_{dn} 65 or greater is approximately 3,930 acres.

Source: Wasmer and Maunsell 2002.

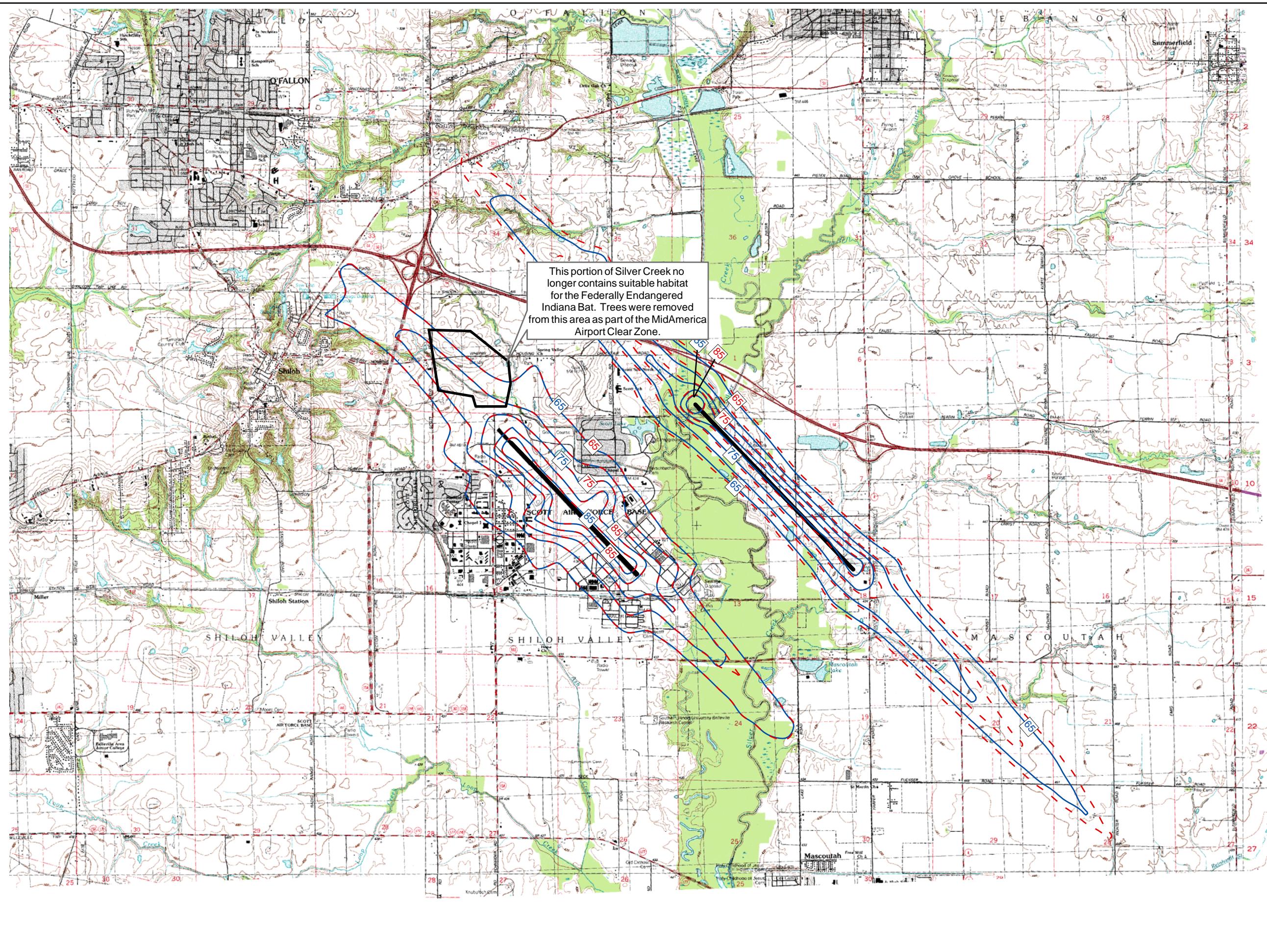


Figure 3-1. Scott/MAA Noise Contours

3.3.2.2 Ground-Based Activity

Some additional noise results from day-to-day activities associated with operations, maintenance, and the industrial functions associated with the operation of the airport. These noise sources include the operation of ground-support equipment, and other transportation noise from vehicular traffic. However, this noise is generally localized in industrial areas on or near the airfield, or on established lines of communication supporting traffic to-and-from the airfield. Noise resulting from aircraft operations remains the dominant noise source in the airfield region.

3.4 WASTES, HAZARDOUS MATERIALS, AND STORED FUELS

The *Resource Conservation and Recovery Act* (RCRA) established statutory requirements that serve as the basis of the hazardous waste regulations. These regulations are found at 40 CFR 260-279. Corresponding state regulations identifying and listing hazardous wastes and standards applicable to generators of hazardous wastes are found at 35 IAC 721-722. Hazardous chemicals and materials are defined in 29 CFR 1900.1200. Legal requirements regarding emergency planning and reporting of hazardous and toxic chemicals are noted in the *Emergency Planning and Community Right to Know Act* (EPCRA). Scott AFB has an active Installation Restoration Program (IRP).

3.5 WATER RESOURCES

3.5.1 Surface Water Resources

MidAmerica Airport and Scott AFB are located within the Lower Kaskaskia Watershed in St. Clair County. Streams located within Scott AFB include Ash and Silver Creek. Ash Creek originates approximately one mile northwest of the base near Shiloh, Illinois. From its origin, Ash Creek flows through the base and abuts the rear of the existing commissary before discharging into Silver Creek. Silver Creek forms the western boundary of Scott AFB and the eastern boundary of MidAmerica Airport. The creek typically has steep mud banks, low stream gradient, and turbid water. The drainage area of Silver Creek, which encompasses approximately 395 square miles upstream of Scott AFB/MidAmerica Airport, consists primarily of farmland. Scott AFB is also drained by overland flow to diversion structures, field tiles, storm sewers, drainage ditches, and culverts. About 60 percent of the base is drained by Silver Creek and the remaining area is drained by Ash Creek (Woolpert, 2002). Two unnamed tributaries flow south and west through MidAmerica Airport and drain into Silver Creek.

3.5.2 Floodplains

Executive Order 11988 dated May 24, 1977, entitled “Floodplain Management” defines a floodplain and establishes a policy of avoiding impacts to floodplains when practicable. Facility design and construction, real property acquisition, maintenance activities, real property disposal, and natural resource program implementation actions must comply with EO 11988. The basis for this guidance includes the CWA, 33 U.S.C. 1251 et seq., *National Environmental Policy Act of 1969*, (NEPA), 42 USC 4321. et. seq., the *National Flood Insurance Act of 1968*, 42 USC 4001, et seq., the *Flood Disaster Protection Act of 1973*, and Public Law 93-235, 87 Statute 975.

Floodplains at Scott AFB and MidAmerica Airport are located adjacent to Silver Creek near the eastern boundary of the base (Figure 3-2).

3.5.3 Groundwater Resources

Scott AFB and MidAmerica Airport are situated in an area of southwestern Illinois that lacks aquifers of regional significance.

The significant hydrogeologic units present in the area include alluvium containing sand and gravel lenses, sand and gravel layers within the glacial deposits, and sandstone or other permeable strata within the bedrock. Water quality varies greatly, with water from the surficial deposits usually of slightly better quality than water from the bedrock units. Precipitation is the primary source of groundwater recharge in the area.

A brief description of the principal water-bearing units, in order of increasing depth, follows. The information presented in this section is derived primarily from the *Final RI/RFI Work Plan for Site SS-14 (Consolidated Aircraft Maintenance Squadron) at the Scott Air Force Base* (Montgomery Watson, 2002a).

Alluvium: The sand and gravel layers of the Cahokia alluvium include deposits of poorly sorted silt, clay, and silty sand with lenses of sand and gravel. Groundwater is present in these layers at shallow depths (1 to 3 foot below ground surface (bgs)). Its thickness varies, but it is commonly less than 50 feet. Potentially large quantities of water can be pumped from the alluvium. However, it is not used widely in the vicinity of Scott AFB because its occurrence is limited to the flood-prone lowlands and municipal water supplies are readily available to most local consumers. The alluvium is found mainly on the eastern portions of the base along the lowlands of Silver Creek.

Glacial Aquifers: The sand and gravel layers in the glacial deposits are permeable unconsolidated units that are typically thin, discontinuous, and of limited extent in the vicinity of the base. The water-bearing zones include the sand and gravel layers within the Pearl Formation and within the Vandalia Till Member of the Glasford Formation. Data from test wells installed in 1942 by the Illinois State Water Survey indicated that the discontinuous sand and gravel zones ranged in thickness from 1 to 12 feet. Groundwater occurred at depths ranging from 10 to 35 feet bgs in these wells, as measured by Environmental Resources Management in 1991. East of Silver Creek, small industrial and municipal wells having yields of about 20 gallons per minute (gpm) may be possible in these glacial aquifers. Groundwater reportedly discharges to the underlying bedrock or to local surface water as base flow.

Bedrock Aquifers: Pennsylvanian age bedrock lies approximately 85 feet bgs in the vicinity of Scott AFB and is approximately 265 feet thick. The strata consist of low permeability shale with thin discontinuous beds of sandstone and limestone. The sandstone and limestone can yield small quantities of water to domestic supplies, with recharge occurring from the overlying unconsolidated materials. Groundwater flow through these strata is generally to the southeast towards deeper parts of the Illinois Basin. Water-bearing fractures are most likely to occur in the upper 50 feet of the bedrock. Underlying the Pennsylvanian strata is Chesterian Series (Mississippian Age) bedrock, which includes permeable sandstones. The reported yield of wells

completed in these sandstones ranges from 20 to 50 gpm, with drawdowns varying from 175 to 300 feet.

3.5.4 Water Use and Treatment

The CWA regulates water quality. These regulations are found at 40 CFR, Subchapter D. Scott AFB and MidAmerica Airport are situated in an area of southwestern Illinois that lacks aquifers of regional significance. Precipitation is the primary source of groundwater recharge in the project area. Most communities in St. Clair County, including Scott AFB and several communities in the Granite City area in Madison County, obtain their water from the Mississippi River through the Illinois American Water Company. No drinking water wells are known to be in use within the boundaries of Scott AFB/MidAmerica Airport. However, domestic and agricultural users within about 10 miles of the base obtain a limited amount of water from shallow aquifers.

An on-site sewage treatment plant serves Scott AFB with a capacity of two million gallons per day (mgd). The sewage flow averages about 1.45 mgd. The plant provides tertiary treatment, and the effluent is discharged to a tributary of Silver Creek at the southeast part of the base (Woolpert, 2002).

3.5.5 Wetlands

The CWA, as noted earlier in this section, sets the basic structure that regulates discharges and dredged materials that could enter wetlands. There are many other laws and regulations, such as the *Federal Agriculture Improvement and Reform Act*, the *North American Wetlands Conservation Act*, and the *Endangered Species Act*, that are applicable to wetlands protection. By definition, wetlands are transitional lands between terrestrial and aquatic systems where the water table is usually at the surface or the land is covered by shallow water. Wetlands generally include swamps, marshes, bogs, and similar areas. Per the Federal Interagency Committee on Wetland Delineation (1989), jurisdictional wetlands are those that are found to contain:

- 1) Hydrophytes (plants that grow in water or on soils periodically deficient in oxygen due to inundation by water);
- 2) Hydric soils (soils that are saturated, ponded, or flooded long enough to produce anaerobic conditions);
- 3) Wetland hydrologic conditions (permanent or periodic inundation or soil saturation to the surface).

The largest area of wetlands at Scott AFB/MidAmerica Airport are located within the bottomland forest adjacent to Silver Creek (Figure 3-2). Other wetland resources located at Scott AFB/MidAmerica Airport include those located adjacent to Ash Creek and a number of ponds and depressional wetlands scattered throughout the project site.

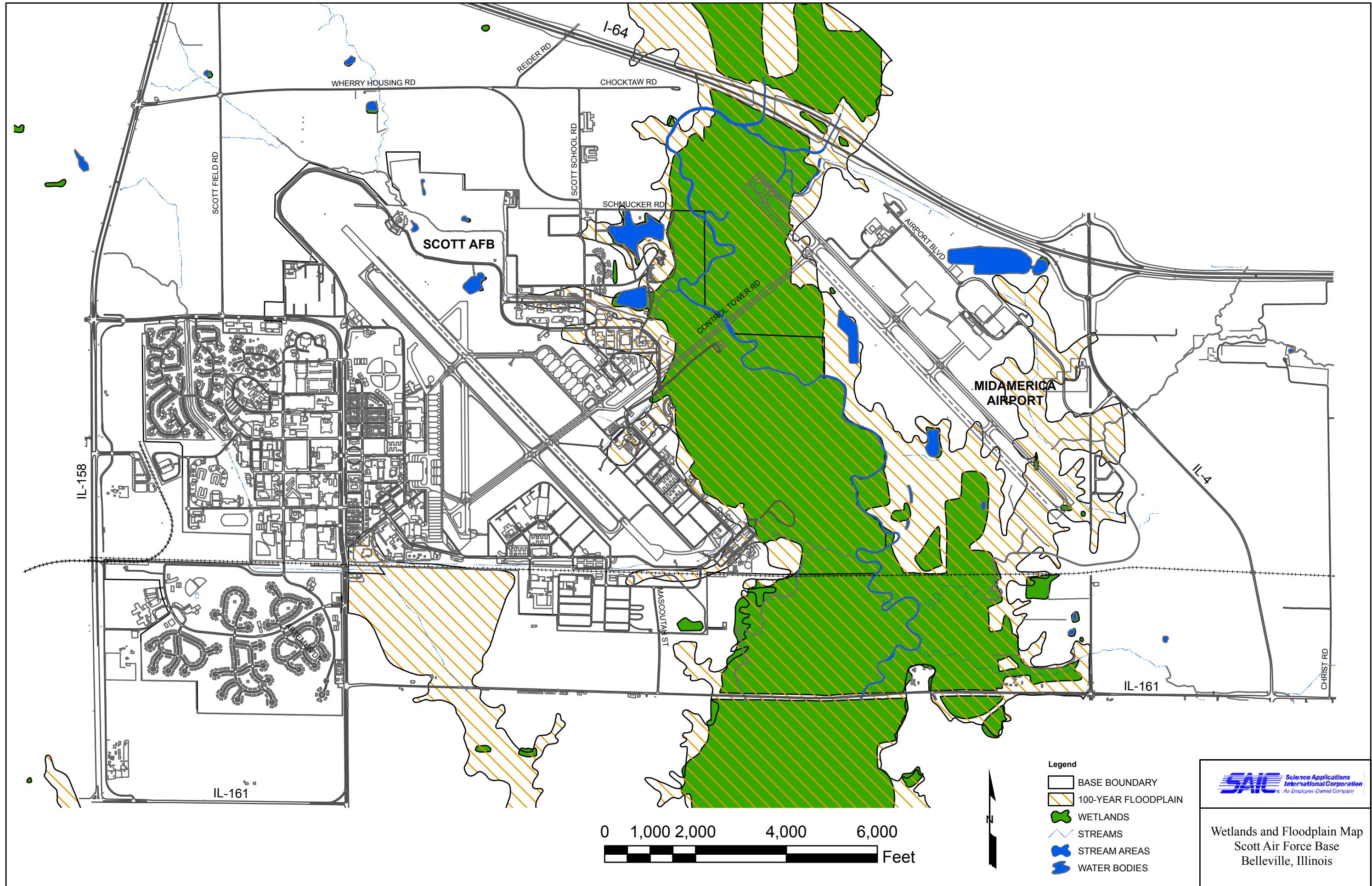


Figure 3-2. Wetlands and Floodplain Map

3.6 BIOLOGICAL RESOURCES

The project area occurs in the Southern Till Plain natural division of Illinois. This natural division is dominated by agricultural lands, grasslands, and forested areas (INHS, 2004). The natural prairie communities that once dominated this natural division have been mostly replaced by agricultural fields and urban developments. Natural areas located at Scott AFB include wooded wetlands and bottomland hardwoods that are surrounded by upland hardwoods and open areas.

3.6.1 Wildlife

Numerous wildlife species occur or have the potential to occur at Scott AFB/MidAmerica including over 40 species of herpetofauna (USAF, 1991) and over 230 species of birds (USACE, 2002). Mammal species that may occur in the area include Eastern cottontail, woodchuck, gray and fox squirrels, white tailed deer, Virginia opossum, beaver, muskrat, raccoon, and coyote (Hoffmiester, 2002).

3.6.2 Aquatic Biota

Several aquatic habitats are present in the Proposed Action area these habitats include Silver, Ash and Loop Creeks as well as several man made ponds and lakes. Approximately 40 aquatic species may occur in the project area (Smith, 1960). Abundant fish species that have been collected at the project area include: mosquito fish, blackstripe topminnow, black bullhead, freckled madtom, channel catfish, red shiner, creek chub, bigmouth shiner, and fathead minnow (TAMS 1988 in USAF, 1991).

3.6.3 Threatened and Endangered Species

No plants listed as endangered by the Illinois Endangered Species Protection Board (IESPB), were found within the study site during botanical surveys conducted on September 19, 2001. Although no botanical endangered species were discovered, suitable habitat does exist for both state and federally listed species within the Scott AFB boundaries.

A single federally endangered Indiana bat (*Myotis sodalis*) was captured during a study conducted by personnel from the U.S. Engineer Research and Development Center in July 2001. The Indiana bat was identified along Silver Creek near the confluence of Carolina Creek which is located approximately ¾ mile north of the Control Tower (USAERDC, 2001). Suitable Indiana bat habit does exist within the project area. Potential impacts to this habitat are discussed in Chapter 4.

State threatened or endangered bird species identified at Scott AFB include the brown creeper, red-shouldered hawk, and little blue heron. Due to low numbers of brown creepers and significant loss of floodplain forest habitat, the state of Illinois considers the brown creeper a threatened species (IFWIS, 2004). The state threatened red-shouldered hawk was detected within the boundaries of Scott AFB during the 2001 bird survey (USAERDC, 2001). The red-shouldered hawk is typically found in riparian floodplain forests with mature hardwood trees.

Pending the approval of the 2004 Illinois Threatened and Endangered Species List, the brown creeper and red-shouldered hawk will no longer be considered as threatened species by the State of Illinois. The presence of a little blue heron (state endangered) was also incidentally noted during the 2001 bird survey.

3.6.4 Noise Exposure

Noise levels that exceed 90 dB are considered to have an adverse effect on wildlife and domestic livestock. Studies have shown that sound levels below 90 dB lessen adverse impacts on wildlife behavior (Manci et al., 1988). An outdoor (unweighted) L_{max} of 65 dB was used in the 1991 EIS as a reasonably conservative estimator of noise impacts to animals. The findings of the 1991 EIS indicate that wildlife in the Silver Creek bottomlands are exposed to about 55.8-62.8 dB L_{dn} .

3.7 SOCIOECONOMIC RESOURCES

Socioeconomic resources are described in this section using demographic and employment measures, which are key factors influencing housing demand, education needs, and infrastructure requirements. Implementation of the Proposed Action or Alternative A would affect a relatively small number of personnel, and the socioeconomic impacts of the Proposed Action would be confined primarily to the employment and income generated from construction activities.

The Location and ROI for the Proposed Action and Alternative A is Scott AFB and MidAmerica Airport, located in St. Clair County, Illinois, approximately 20 miles east of the City of St. Louis, Missouri. Together, the base and airport cover approximately 3,500 acres and are located in a predominantly agricultural area. The project area is immediately south of Interstate Highway 64, near the cities of O'Fallon and Belleville (Figure 1-1). The socioeconomic ROI for an analysis of this type is generally defined by the residence patterns of current installation personnel, the number of personnel associated with the action under consideration, and the value of any construction associated with the action.

The population of St. Clair County in the year 2000 was 256,599 (US Census Bureau, 2000). There are approximately 11,000 persons employed by Scott AFB (8,100 military, 2,800 civilians) and an estimated 8,500 military retirees in the area who use Scott AFB services (Woolpert, 2002). The total Scott AFB community, on- and off-base, comprises approximately 30,900 military and civilian personnel and their families (Woolpert, 2002).

3.8 CULTURAL RESOURCES

Numerous cultural resource studies have been conducted at Scott AFB and in the vicinity of MidAmerica Airport. These studies have included both archaeological surveys (Hoffman 1986, Holley, Gums, and Brown 1990, De Vore 1990, Holley and Gums 1991, Holley and Watters 1991, Devore 1992) as well as architectural studies (Thomason 1992, Weitze 1996). As a result of these studies, 104 historic buildings and structures have been identified within the Scott Field Historic District, which is listed in the National Register of Historic Places (NRHP). Building 3200 (alert hanger) has been identified as eligible for listing on the NRHP. Nine archaeological sites have been identified within the current boundaries of Scott AFB. None of these sites are eligible for listing on the NRHP.

Several of these studies were conducted prior to the construction of the joint use facility and addressed the areas that were impacted during construction of MidAmerica Airport and the connecting taxiway.

The cultural resource studies conducted in the past at Scott AFB/MidAmerica Airport do not represent a comprehensive study of the facility. Several areas within Scott AFB have been identified as having the potential to contain additional cultural resources (Figure 3-3). These include portions of the Silver Creek floodplain as well as several areas along the base periphery that adjoin reported cultural resource areas outside of the base boundary. However, none of these areas would be impacted by implementation of any of the alternatives.

Historical and cultural resources are protected under the *National Historic Preservation Act* (16 USC 470a-470w), EO 11593, *Protection and Enhancement of the Cultural Environment*, the *Archaeological and Historic Preservation Act* (16 USC 469-469c), the *Historic Sites Act* (16 USC 461-467), and the *Illinois State Agency Historic Resources Preservation Act*. Federal agencies must provide an opportunity for comment and consultation with the Illinois Historic Preservation Agency and the Advisory Council on Historic Preservation when an action has the potential to affect historic or cultural sites. AFI 32-7065, Cultural Resources Management, must be complied with as well.

3.9 LAND USE

3.9.1 Local Communities

Scott AFB and MidAmerica Airport are located in a predominantly agricultural area that is surrounded by the municipalities of O'Fallon, Shiloh, and Mascoutah within the St. Clair County Airport Environs Overlay Zone (AEOZ). Each of these communities has developed its own zoning and planning programs that address the areas around Scott AFB and MidAmerica Airport. The City of O'Fallon completed a Comprehensive Land Use Plan in 2001. This comprehensive plan is generally compatible with existing flight activities at the joint airports. Targeted growth areas in this plan are located northwest of O'Fallon and away from the Scott AFB and MidAmerica Airport. The Village of Shiloh takes into account operations at Scott AFB and MidAmerica Airport when conducting planning activities. The City of Mascoutah has current zoning and land use maps that regulate growth in the areas of the city surrounding MidAmerica Airport. These areas are zoned in accordance with AICUZ standards. The City of Mascoutah is following a growth plan that encourages growth northward to Interstate 64.

3.9.2 Noise

As part of the AICUZ Program, Scott AFB has established land use compatibility guidelines for properties surrounding military airfields. The FAA also has established land compatibility guidelines to regulate development around civilian airfields. These guidelines help to mitigate noise and safety impacts for land uses surrounding Scott AFB and the MidAmerica Airport. The

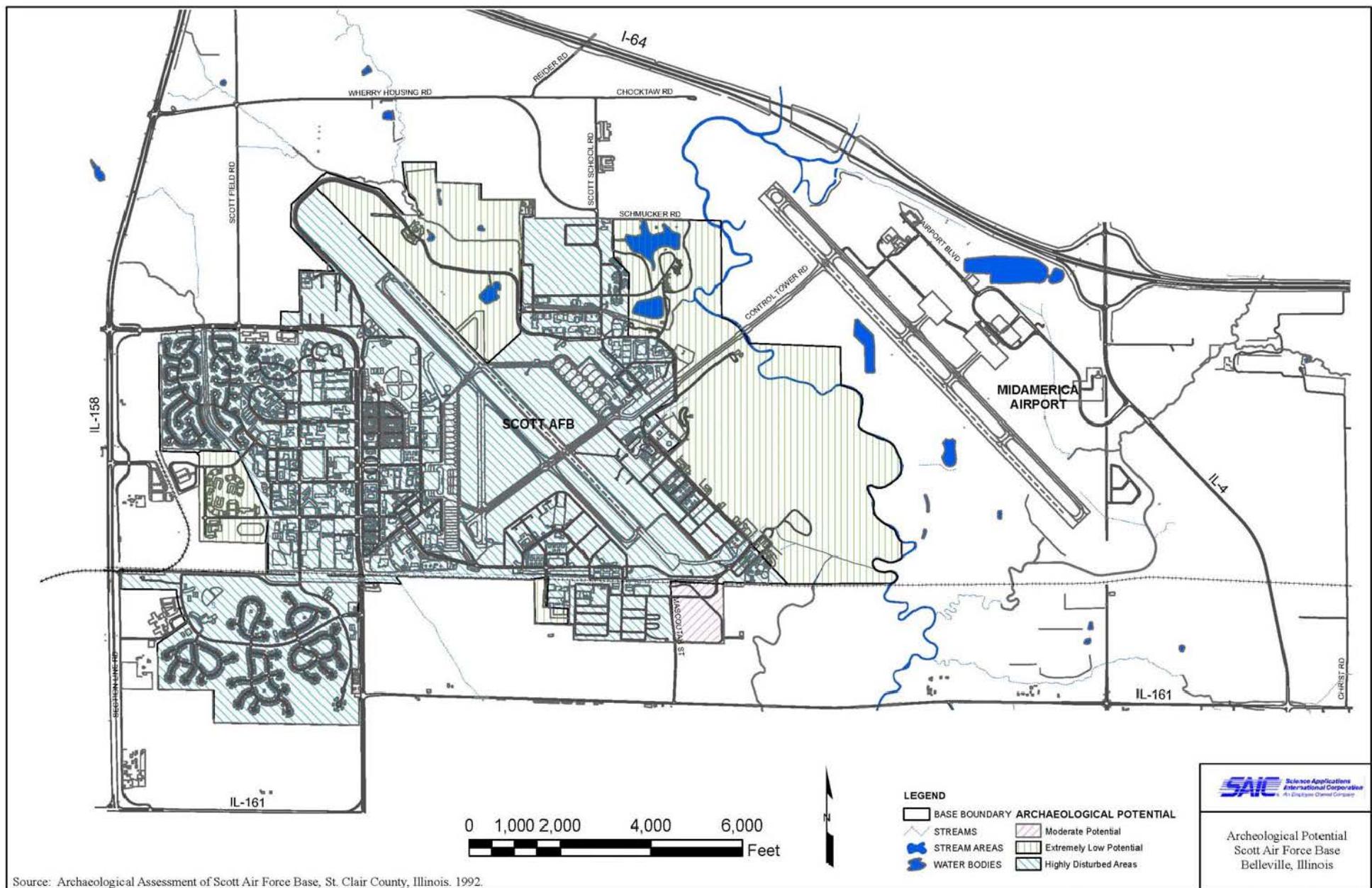


Figure 3-3. Archaeological Potential at Scott Air Force Base

AICUZ program uses information on aircraft types, flight patterns, power settings, number of operations, and time of day or night to estimate average busy-day noise levels.

Studies on residential aircraft noise recommend that no residential land use should occur in areas with noise levels exceeding 75 dB L_{dn}. However, no FAA restrictions apply to office buildings in areas with noise levels below 70 dB (14 CFR 150). No restrictions apply to areas with noise levels below 65 dB L_{dn}.

3.10 AIRSPACE/AIRFIELD OPERATIONS AND SAFETY

3.10.1 Current Operations

Current military flight activities at Scott AFB/MidAmerica Airport are primarily from C-9, C-21, and KC-135 mission and training operations. Additional operations occur due to different transient aircraft on training and mission flights. These include flights from the Aero Club, Boeing-727s and Jetstream 31s (J-31). Military operations at both Scott AFB and MidAmerica Airport accounted for nearly 33,000 operations during the calendar year 2002. Civilian operations accounted for approximately 4,000 operations. These numbers were derived by multiplying the average numbers in Table 3-6 by 292 flight days.

An average day for C-9 operations at Scott AFB includes approximately 1.6 mission sorties and approximately 2.38 pilot training sorties. All training sorties and 99 percent of mission sorties occur between 7:00 a.m. and 10:00 p.m. C-21 pilots fly approximately 1.7 mission sorties and one training sortie per day at Scott AFB. KC-135E sorties are flown at an average of approximately 4.27 per day. Departures only occur during day time hours (7:00 a.m. to 10:00 p.m.) while approximately ten percent of arrivals occur during nighttime hours (10:00 p.m. to 7:00 a.m.).

The Aero Club operates three types of single engine and one twin engine propeller driven aircraft. Approximately 5.05 sorties are flown per day and only occur during day time hours. MidAmerica Airport also supports scheduled passenger service as well as general aviation activities. Passenger flights occur two to three times weekly and are supported by B-727s. Charter and cargo flights are also supported out of MidAmerica Airport.

3.10.2 Airspace Management

Airspace management for regions outside of major population centers is controlled by Air Route Traffic Control Centers (ARTCC) located across the country. Scott AFB/MidAmerica Airport are located within the Kansas City ARTCC and controlled by St. Louis departure/approach control. The St. Louis departure/approach control is responsible for flight traffic into and out of Scott AFB/MidAmerica, Airport with the Scott AFB tower controlling visual flight activity around the two runways. As part of this coordination, flights departing Scott AFB/MidAmerica Airport generally change headings to the east after takeoff. Aircraft are generally not turned to the west in order to avoid the approach corridor for Lambert Airport. Arrival patterns at Scott AFB/MidAmerica Airport are basically the opposite pattern with planes descending south and east of St. Louis and brought into the airport on a northerly heading.

3.11 ENVIRONMENTAL MANAGEMENT, POLLUTION PREVENTION

The USAF recognizes the importance of pollution prevention (P2) in protecting the environment, achieving compliance objectives, and reducing waste disposal costs. Such successful P2 programs as recycling, waste minimization, product substitution, and process changes, among others, are planned or underway at USAF installations worldwide. Scott AFB has developed a policy to reduce the use of hazardous and toxic materials through source reduction and recycling.

3.12 GEOLOGY AND SOILS

Pennsylvanian bedrock underlies Scott AFB/MidAmerica Airport at a depth of approximately 85 feet. Underlying the Pennsylvanian bedrock is the Chesterian Series sandstone. There are no geologic outcrops at Scott AFB/MidAmerica Airport. Soils at the sites of Scott AFB and MidAmerica Airport have been highly disturbed.

3.13 ENVIRONMENTAL JUSTICE

St. Clair County is a large, demographically diverse county, with communities ranging from urban areas of East St. Louis and Belleville to small rural towns east and west of Scott AFB/MidAmerica Airport. The year 2000 population of St. Clair County was approximately 67.9 percent Caucasian, and 34.3 percent minorities, with the predominant minority described as African-American (28.8%); 2.2 percent of the county's population is considered Hispanic (U.S. Census Bureau, 2000). There are no low-income or minority disadvantaged populations in the area of the Proposed Action or Alternative A.

3.14 INDIRECT AND CUMULATIVE IMPACTS

The portion of Scott AFB/MidAmerica Airport in which the Proposed Action and Alternative A are located is considered to be an improved area that is highly disturbed. There are no known indirect or cumulative impacts associated with the Proposed Action or Alternative A.

4.0 ENVIRONMENTAL CONSEQUENCES

4.1 INTRODUCTION

Environmental consequences of the Proposed Action, Alternative A, and the No-Action Alternative are addressed in this section. The Proposed Action would include implementation of a revised JUA. Alternative A would include shifting all military air traffic to the runway at Scott AFB and the No-Action alternative would result in the operation of the Scott AFB and MidAmerica Airport runways under the outdated 1991 JUA.

The analysis process determines the consequences of each action and the anticipated impact(s) that the action could have, if implemented. The Proposed Action, Alternative A, and the No-Action Alternative could generate no environmental impact, or encompass environmental consequences that may fall into the categories described in Table 4-1.

Table 4-1 Definitions of Environmental Consequences

Short-term	effects caused during the construction and/or initial operation of the action
Long-term	effects caused after the action has been completed and/or the action is in full and complete operation or effects of the action if not approved
Irreversible	effects caused by the proposal that cannot be reversed
Irretrievable	effects caused by an alternative that change outputs or commodities (e.g. trees, cattle, hiking, fishing) of land's use <i>and</i> must be reversible
Positive	constructive, progressive effects
Negative	harmful, destructive, unsafe, risky
Minor	trivial, irrelevant, inconsequential
Major	vital, primary, important
Adverse	unfavorable, undesirable, harsh
Direct	caused by the action and occur at the same time and place
Indirect	caused by the action and effects occur later in time or farther removed in distance, but reasonably foreseeable
Cumulative	nonrelated actions that have, are, or probably would occur in the same locality

A **significant** impact, as it applies to NEPA, requires considerations of both context and intensity. Context means that the significance of an action must be analyzed in several arenas, such as society as a whole (human, national), the affected region, the affected interests, and the locality. Significance varies with the setting of the Proposed Action. Intensity refers to the severity of impact. Responsible officials must bear in mind that more than one agency may make decisions about partial aspects of a major action. Impacts may be both beneficial and adverse. Intensity also includes the degree to which the Proposed Action and alternatives affect public health or safety. A summary table of the environmental resources that are determined to be impacted by the Proposed Action, Alternative A, and the No-Action Alternative is provided in Section 4.16, Table 4-4.

4.2 AIR QUALITY

4.2.1 Proposed Action and Alternative A

A conformity determination would not be required, as the total of direct and indirect emissions from proposed activities at the site of the Proposed Action or Alternative A are below *de minimus* thresholds specified at 40 CFR 93.153(b)(1). Specifically stated, implementation of the Proposed Action or Alternative A would not increase emissions over baseline emission levels. The statutory requirements of conformity are included in the *Clean Air Act (CAA)*, Section 176(c) and require the EPA to publish regulations requiring federal actions to conform to applicable state or federal implementation plans (SIPs or FIPs) to ensure that the actions do not interfere with strategies employed to attain the NAAQS. The EPA proposed conformity regulations entitled *Determining Conformity of General Federal Actions to State or Federal Implementation Plans*. These were brought into effect on January 31, 1994. The intent of the conformity ruling is to ensure that federal actions do not adversely affect the timely attainment and maintenance of air quality standards. USAF personnel and installation planners will need to analyze each USAF action, in accordance with EPA regulation 40 CFR 93, to ensure conformity with the applicable SIP or FIP. The conformity analysis examines the impacts of the direct and indirect air emissions from a proposed USAF action and determines whether the action conforms to the applicable SIP or FIP. The USAF Conformity Guide will assist installation personnel in determining when and why USAF actions must be analyzed for conformity with SIPs, who to consult, and how long the conformity process will take. Moreover, the Proposed Action or Alternative A would be in compliance with, or consistent with, all relevant requirements and milestones contained in the Illinois SIP. There would be **no impact** to air quality issues as the result of the implementation of the Proposed Action or Alternative A.

4.2.2 No-Action Alternative

There would be **no impact** to air quality issues if this alternative were selected.

4.3 NOISE

Noise, often defined as unwanted sound, is one of the most common environmental issues associated with human activities, especially around airports. Concerns regarding noise relate to certain potential impacts such as hearing loss, non-auditory health effects, annoyance, speech interference, sleep interference, and effects on domestic animals, wildlife, structures, terrain, and historic and archaeological sites.

4.3.1 Methodology

Noise associated with aircraft operations at the installation associated with the Proposed Action will be considered and compared with current conditions to assess impacts. Data developed during this process will also support analyses in other resource areas.

Based on numerous sociological surveys and recommendations of federal interagency councils, the most common benchmark referred to is a L_{dn} of 65 dBA. This threshold is often used to

determine residential land use compatibility around airports, highways, or other transportation corridors. Two other average noise levels are also useful:

- A L_{dn} of 55 dBA was identified by the USEPA as a level “. . . requisite to protect the public health and welfare with an adequate margin of safety” (USEPA 1974). Noise may be heard, but there is no risk to public health or welfare.
- A L_{dn} of 75 dBA is a threshold above which effects other than annoyance may occur. It is 10 to 15 dBA below levels at which hearing damage is a known risk (Occupational Safety and Health Administration [OSHA] 1983). However, it is also a level above which some adverse health effects can not be categorically discounted.

Public annoyance is the most common impact associated with exposure to elevated noise levels. When subjected to L_{dn} of 65 dBA, approximately 12 percent of persons exposed will be “highly annoyed” by the noise. At levels below 55 dBA, the percentage of annoyance is correspondingly lower (less than three percent). The percentage of people annoyed by noise never drops to zero, but at levels below 55 dBA it is reduced enough to be essentially negligible.

4.3.2 Impacts

4.3.2.1 Proposed Action

Information provided by ATC indicates that KC-135 operations have increased slightly from 2001 operations. Additional tanker operations would be supported by the runway at MidAmerica Airport. The MidAmerica Airport runway (14L/32R) is 2,000 feet longer than the 8,001-foot runway at Scott AFB (14R/32L). This additional length enhances flight safety, especially when tanker aircraft are heavy. All other aviation operations would continue as under current conditions.

Under this proposal, average daily aviation operations at the complex would increase from approximately 105 to 116, an increase of approximately ten percent. Although this is a minor increase in daily aviation operations, the more important change resulting from this action is the shift in operations from the Scott AFB runway to the MidAmerica Airport runway. These operations are shown in Table 4-2.

Table 4-2 2004 Average Daily Operations At Scott AFB/MidAmerica Airport ¹

Aircraft	Arrivals		Departures		Closed Patterns ²	
	Day	Night	Day	Night	Day	Night
KC-135	4.500	0.500	4.992	0.008	13.500	1.500
Other Based Military	8.111	0.585	8.610	0.087	0	0
Transient Military	5.548	0.043	5.548	0.043	0	0
Air Carrier / Air Taxi	2.854	0	2.854	0	0	0
General Aviation	5.973	0	5.963	0	15.138	0
Total	26.986	1.128	27.967	0.138	28.638	1.500

Notes: ¹Daily operations are based on averages of annual operations; therefore, numbers do not round.

²Because closed patterns consist of a landing and a takeoff (two aviation operations), the 30.138 closed patterns shown equate to 60.276 aviation operations.

Sources: Personal communication, Newman 2004.

Although the base provided 2004 updated flight operational data, the 2001 AICUZ data is currently the most accurate source of information related to noise impacts. The 2004 flight operational data, as provided by the base, slightly changes the configuration of the noise contours around the complex. The contours associated with Scott AFB's runway show little or no change. However, there are slight increases in the area encompassed by the 65 L_{dn} and 70 L_{dn} contours at MidAmerica Airport. Compared to current conditions, the 65 L_{dn} contour extends approximately 2,300 feet further to the northwest, and 1,500 feet further to the southeast. The 70 L_{dn} contour extends an additional 1,600 feet to the northwest, and 2,900 feet to the southeast. The contours associated with the Proposed Action are depicted in Figure 3-1. Table 4-3 reflects the changes in land areas exposed to elevated noise levels.

Table 4-3 Change In Land Area Exposed To Indicated Sound Levels

Sound Level (In L_{dn})	Acres of Land ¹		Net Change (Acres)	Percent Change
	Baseline	Proposed		
65 – 70	2,125.00	2,272.80	+ 147.80	+ 7%
70 – 75	1,016.07	1,161.97	+ 145.90	+ 14%
75 – 80	441.30	481.57	+ 40.27	+ 9%
80 – 85	232.24	264.04	+ 31.80	+ 14%
> 85	115.09	115.82	+ 0.73	+ 1%
Total	3,929.70	4,296.20	+ 366.50	+ 9%

Note: ¹Land areas exposed to indicated sound levels. Total area exposed to L_{dn} 65 or greater is shown in Total.

Source: Wasmer and Maunsell 2002.

As indicated, increases in sound levels associated with the Proposed Action are minimal, and would result in **minor adverse** impacts.

4.3.2.2 Alternative A

In 1996, a Final EA and Finding of No Significant Impact for the Realignment of the Illinois Air National Guard 126th ARW to Scott AFB, Illinois were completed. This EA evaluated an alternative that included the joint military/civilian use of MidAmerica Airport as well as use of the Scott AFB runway as the primary runway for military air traffic. The EA concluded that the removal of flights from the military runway decreases the noise contours from the military runway to the point that fewer off-site people and structures would be affected with the runway sharing option than would be affected without the runway sharing. The difference is due to the proximity of the Cities of O'Fallon and Mascoutah to the runway centerline for Scott AFB. A shift of military aircraft back to the Scott AFB runway shifts the noise contours from east of the cities to essentially over the cities, thereby impacting more residential areas. A comparison of noise levels at 13 sensitive noise receptors in the vicinity of Scott AFB/MidAmerica Airport revealed that all but one of the receptors would have higher noise levels if military operations occurred primarily at the Scott AFB runway. Although the implementation of Alternative A would result in a **minor adverse** impact due to the increase in residential areas affected by noise levels, its implementation would cause greater noise impacts than those associated with implementation of the Proposed Action.

4.3.2.3 No-Action Alternative

Under this alternative, no proposed changes to aviation activity would occur at either facility. Since no changes to aircraft operations or other transportation activities would result from this alternative, noise levels on Scott AFB and the MidAmerica Airport would remain as described in Section 3.3 and only **minor adverse** impacts would result due to noise.

4.4 WASTES, HAZARDOUS MATERIALS, AND STORED FUELS

4.4.1 Proposed Action and Alternative A

Implementation of the Proposed Action or Alternative A would not increase the amount of hazardous material already handled or used at Scott AFB and MidAmerica Airport and therefore no impacts are anticipated.

4.4.2 No-Action Alternative

There would be **no impact** to the environment from wastes or hazardous materials, if the No-Action Alternative were selected.

4.5 WATER RESOURCES

4.5.1 Proposed Action and Alternative A

No construction activities or land disturbance activities are anticipated as part of the Proposed Action or Alternative A. Therefore **no impacts** to surface water or groundwater quality are anticipated from the implementation of the Proposed Action or Alternative A. Likewise no

impacts to floodplains or wetland resources are anticipated with the implementation of the Proposed Action or Alternative A.

4.5.2 No-Action Alternative

There would be **no impact** to surface water, groundwater, wetlands, or floodplains if this alternative were selected.

4.6 BIOLOGICAL RESOURCES

4.6.1 Proposed Action and Alternative A

No impacts to biological resources are anticipated from implementation of the Proposed Action or Alternative A. Indirect impacts could potentially be associated with a change in noise levels at Scott AFB (a detailed description of noise impacts is included in Section 4.3).

4.6.2 No-Action Alternative

No impact to biological resources would result from the implementation of this alternative.

4.7 SOCIOECONOMIC RESOURCES

4.7.1 Proposed Action and Alternative A

Implementation of the Proposed Action or Alternative A would not change economic conditions in the ROI of Scott AFB and MidAmerica Airport. No jobs would be created or lost and there would be no change in local populations as a result of implementing the Proposed Action or Alternative A. Therefore, implementation of the Proposed Action or Alternative A would have **no impacts** on socioeconomic resources in the vicinity of Scott AFB/MidAmerica Airport.

4.7.2 No-Action Alternative

Similar to the implementation of the Proposed Action, implementation of the No-Action Alternative would have **no impact** on socioeconomic resources.

4.8 CULTURAL RESOURCES

4.8.1 Proposed Action and Alternative A

No construction or land disturbance activities are associated with the Proposed Action or Alternative A. Therefore, **no impacts** are anticipated from implementation of the Proposed Action or Alternative A.

4.8.2 No-Action Alternative

There would be **no impact** to cultural and/or historical resources if the No-Action Alternative were selected. Because no construction would occur, there would be no possibility of excavating any type of cultural resource, (e.g., artifact) as part of this project.

4.9 LAND USE

4.9.1 Proposed Action and Alternative A

Implementation of the Proposed Action or Alternative A would not require any additional construction or additional land acquisitions. Therefore **no impacts** are anticipated.

No major increases in levels of air pollutants or noise levels are anticipated with the implementation of the Proposed Action or Alternative A. Local communities such as Mascoutah and O'Fallon currently consider the noise levels associated with Scott AFB/MidAmerica Airport in their current zoning regulation and therefore existing noise levels would have no affect on surrounding land uses. (Air quality impacts are discussed in detail in Section 4.2 and potential noise impacts are discussed in Section 4.3).

4.9.2 No-Action Alternative

Impacts to land use under the No-Action Alternative would be comparable with impacts associated with the Proposed Action and therefore **no impacts** to land use would occur as a result of implementation of the No-Action Alternative.

4.10 AIRSPACE/AIRFIELD OPERATIONS AND SAFETY

4.10.1 Proposed Action and Alternative A

Implementation of the Proposed Action would allow the use of the Scott AFB and MidAmerica Airport runways in a manner that is consistent with the existing Scott AFB East radar traffic pattern. This allows for the use of the longer MidAmerica Airport runway when required by mission parameters or weather conditions. Therefore implementation of the Proposed Action would have a **positive impact** upon airspace/airfield operations and safety.

Implementation of Alternative A would prevent the military use of the MidAmerica Airport. This alternative would prevent military aircraft from having the option to select the longer and potentially safer of the two runways during periods of less than ideal conditions (e.g., night operations, inclement weather). In addition, the KC-135 requires a longer runway when departing with large mission-dictated fuel loads. The elimination of the MidAmerica Airport runway as an option for KC-135 pilots would reduce the chances for KC-135 pilots to perform their mission. As a result, the implementation of Alternative A would have a **negative impact** on airspace/airfield operations and safety.

4.10.2 No-Action Alternative

Implementation of the No-Action Alternative would have minor **negative impacts** to airspace/airfield operations and safety. Implementation of the No-Action Alternative would result in operating both the Scott AFB and MidAmerica runways under an obsolete agreement that does not accurately reflect current flying operations. In addition, if the No-Action Alternatives were implemented, there would be no guiding document that would set forth the responsibilities of the USAF or St. Clair County regarding operational use, emergency response, security, maintenance and repairs or other matters necessary to operate a joint use facility.

4.11 ENVIRONMENTAL MANAGEMENT, POLLUTION PREVENTION

4.11.1 Proposed Action and Alternative A

No additional waste material would be produced with the implementation of the Proposed Action or Alternative A and therefore either action would have **no impacts** to the environmental management or pollution prevention programs.

4.11.2 No-Action Alternative

If the No-Action Alternative were implemented, no construction activities would occur on site and **no impacts** to environmental management or pollution prevention programs would be anticipated.

4.12 GEOLOGY AND SOILS

4.12.1 Proposed Action and Alternative A

No construction or land disturbance activities are associated with the Proposed Action or Alternative A. Therefore, **no impacts** to geological or soil resources are anticipated from implementation of the Proposed Action or Alternative A.

4.12.2 No-Action Alternative

There would be **no impact** to geological or soil resources if the No-Action Alternative were selected.

4.13 ENVIRONMENTAL JUSTICE

4.13.1 Proposed Action and Alternative A

There are no minority or low-income populations in the areas of the Proposed Action and Alternative A; therefore, EO 12898, *Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations*, is not applicable.

Implementation of the Proposed Action or Alternative A would have **no impact** to minority or low-income populations.

4.13.2 No-Action Alternative

The No-Action Alternative would have **no impact** to minority or low-income populations.

4.14 INDIRECT AND CUMULATIVE IMPACTS

4.14.1 Proposed Action and Alternative A

There are **no known indirect or cumulative impacts** related to implementation of the Proposed Action or Alternative A.

4.14.2 No-Action Alternative

No indirect or cumulative impacts are anticipated under the No-Action Alternative.

4.15 UNAVOIDABLE ADVERSE IMPACTS

4.15.1 Proposed Action and Alternative A

Implementation of the Proposed Action or Alternative A would **not cause any net increases in unavoidable impacts** from the current situation.

4.15.2 No-Action Alternative

No unavoidable minor or major adverse impacts would be caused by implementation of the No-Action Alternative.

4.16 SUMMARY TABLE OF ENVIRONMENTAL CONSEQUENCES

Table 4-4 provides a summary of the potential environmental impacts of the Proposed Action and Alternatives.

Table 4-4 Comparison of Environmental Consequences¹

Environmental Resources	Proposed Action	Alternative A	No-Action Alternative
Noise	Short-term – Minor Adverse Long-term – Minor Adverse	Short-term – Minor Adverse Long-term – Minor Adverse	Short-term – Minor Adverse Long-term – Minor Adverse
Airspace/Airfield Operations	Short-term – Positive Impact Long-term – Positive Impact	Short-term – Negative Impact Long-term – Negative Impact	Short-term – Negative Impact Long-term – Negative Impact

Note: ¹Environmental resources having **no impact** have been excluded from this matrix.

5.0 REFERENCES

AFCEE, 2004. Statement of Work for Preparation of Proposal for the Joint Use Agreement.

City of O'Fallon, 2001. Comprehensive Land Use Plan.

Code of Federal Regulations, 14 CFR FAR, Part 150, Airport Noise Compatibility Planning

Department of the Air Force, Headquarters 375th Airlift Wing Air Mobility Command Scott AFB Illinois. *Integrated Natural Resources Management Plan for Scott AFB*. 2002.

De Vore, S.L., 1990. *Reconnaissance Survey of Proposed 55-Acre Land Acquisition for Dormitory/Dining Hall Facilities, Scott Air Force Base, St. Clair County, Illinois*, U.S. Department of the Interior National Park Service, Rocky Mountain Regional Office, Branch of Interagency Archaeological Services, Denver, May.

De Vore, S.L., 1992. *Archeological Assessment of Scott Air Force Base, St. Clair County, Illinois*, U.S. Department of the Interior National Park Service, Rocky Mountain Regional Office, Branch of Interagency Archaeological Services, Denver.

Dods, Laura. 2004. Personal Communication regarding air emissions at Scott AFB.

Finegold, L.S. C.S. Harris, and H.E. vonGlerke. Community Annoyance and Sleep Disturbance: Updated Criteria for Assessing the Impacts of General Transportation Noise on People. *Noise Control Engineering Journal*, Jan-Feb 1994.

Harrison, R.T. 1973. Forest Background Sound. Report to Record, ED&T 2428, USDA Forest Service, Technology and Development Center, San Dimas, California. In: Harrison, R.T., L.A. Hartmann, and W.J. Makel, 1990. Annoyance from Aircraft Overflights in Wilderness. *NOISE-CON 90*, University of Texas, Austin, Texas, October.

Hoffman, J.J. 1986. *Brief Reconnaissance of Scott Air Force Base, St. Clair County, Illinois*, U.S. Department of the Interior, National Park Service, Rocky Mountain Regional Office, Branch of Interagency Archaeological Services, Denver, July.

Hoffmester, Donald, 2002. *Mammals of Illinois*. University of Illinois, 334 pp.

Holley, G.R. B.L. Gums, and A.J. Brown, 1990. *Phase I Cultural Resource Investigations of the Proposed Expansion of Scott Air Force Base, St. Clair County, Illinois*, prepared for Illinois Department of Transportation, February.

Holley, G.R. and B.L. Gums, 1991. *106-Case Report and Mitigation Plan for the Central Silver Creek Multiple Resource Area: Proposed Expansion of Scott Air Force Base, St. Clair County, Illinois*, prepared for Illinois Department of Transportation, Springfield, Illinois, June.

Holley, G.R. and H.W. Watters, 1991. *Phase I Reconnaissance Survey of the Proposed Airport*

Taxiway Linking the Scott Air Force Base Runway and the Planned Commercial Facility, prepared for Illinois Department of Transportation, Springfield, Illinois, June.

IFWIS; Brown Creeper

<<http://www.inhs.uiuc.edu/chf/pub/ifwis/birds/brown-creeper.html>> 2004.

Illinois Natural History Survey; Southern Till Plain RRA, South Central Illinois, USA
<www.inhs.uiuc.edu/cwe/rra/site22.html> 2004.

Manci, K.M., et al. 1988. *Effects of Aircraft Noise and Sonic Booms on Domestic Animals and Wildlife: A Literature Synthesis*, National Ecology Research Center report NERC-88/29, U.S. Fish and Wildlife Service, Fort Collins, Colorado.

Montgomery Watson, 2002a. *Final Groundwater Monitoring Summary Report (May 2002), SS-14 Consolidated Aircraft Maintenance Squadron (CAMS) and Base Background Wells, Scott Air Force Base, Illinois*, July 2002.

Moulton, Carey L. 1990. Air Force Procedure For Predicting Aircraft Noise Around Airbases: Noise Exposure Model (NOISEMAP) User's Manual. Harry G. Armstrong Aerospace Medical Research Laboratory, Human Systems Division, Air Force Systems Command, Wright-Patterson AFB, OH. AAMRL-TR-90-011. February.

Occupational Safety and Health Administration (OSHA) 1983. Occupational Noise Exposure Standard. Code of Federal Regulations (CFR), Title 29, Part 1910, sec. 1910.95 (29 CFR § 1910.95).

Smith, Adam. 2004. Personal communication with Adam Hill, Economic Development Coordinator, Mascoutah.

Smith, Phillip, 1960. *Fishes of Illinois*, University of Illinois Press.

TAMS, 1988. *Airport Master Plan for Joint Use Operations at Scott Air Force Base, Illinois, Phase II Report – Environmental Assessment – Addendum*, prepared for Illinois Department of Transportation and St. Clair County, Dec. 16, 1998.

Thomason, Phillip J.M., 1992. *Inventory and Evaluation of Historic Building and Structures on Scott Air Force Base, Illinois*. Thomas and Associates, Nashville, Tennessee. Report submitted to the National Park Service, Denver, Colorado, and Headquarters Air Mobility Command , Scott Air Force Base, Illinois. Purchase Order No. PX-1242-1-1112.

USAF; 1991. *Final Environmental Impact Statement for Joint Military-Civilian Use of Scott Air Force Base, Illinois*. Headquarters Military Airlift Command, Scott Air Force Base, Illinois. Volume 1 Impact Analysis.

U.S. Army Engineer Research and Development Center; Environmental Laboratory.
Draft Environmental Assessment of Selected Fauna and Their Habitats at Scott

*AFB Illinois: Bat Surveys, Seasonal Avian Inventories, and Botanical Surveys of
Forested Areas, Vicksburg, Mississippi, December 2001.*

U.S. EPA; National Ambient Air Quality Standards.
<<http://www.epa.gov/air/criteria.html>> 2000.

U.S. Environmental Protection Agency (EPA). 1974. Information on Levels of Environmental Noise Requisite to Protect the Public Health and Welfare With an Adequate Margin of Safety. EPA Report 550/9-74-004.

U.S. Census Bureau; Illinois Quick Facts, St. Clair County, Illinois.
<<http://quickfacts.census.gov/>>

Woolpert LLP, *Scott Air Force Base General Plan*, Dayton, Ohio, May 2002.

6.0 LIST OF PREPARERS

Dave Lewis
375th CES/CEV
Scott Air Force Base

Tom Daves, CHMM
SAIC, 14 years' experience

Brian Tutterow
SAIC, 7 years' experience

William Wuest
SAIC, 20 years' experience

7.0 PERSONS CONTACTED

LtCol Tony Butters	375 OSS/CC Scott AFB, IL 618-256-3608
Ms. Laura G. Dods	375 CES/CEV Scott AFB, IL 618-256-2186
Mr. Thomas Gray	375 OSS/OSA Scott AFB, IL 618-256-4101
MSgt Nathania D. Heltne	375 OSS/OSAB Scott AFB, IL 618-256-8787
Capt. James Hudnell	375 OSS/OSA Scott AFB, IL 618-256-4821
Mr. Dave Lewis	375 CES/CEV Scott AFB, IL (618) 256-2319
LtCol Jim Moore	375 OSS/DO Scott AFB, IL 618-256-4493
Dr. Kofi Newman	375 CES/CECP Scott AFB, IL 618-256-3267
Mr. Andy Rodriguez	375 CES/CEV Scott AFB, IL 618-256-2192
Mr. Paul Schmidt	375 th CES/CEV Scott AFB, IL (618) 256-2046
LtCol Dave Schroeder	375 OSS/DO Scott AFB, IL 618-256-4494

1st Lt. Josef Wein

375 OSS/OSA
Scott AFB, IL
618-256-1612

APPENDIX A
Air Force AF Form 813

REQUEST FOR ENVIRONMENTAL IMPACT ANALYSIS

Report Control Symbol
RCS:

INSTRUCTIONS: Section I to be completed by Proponent; Sections II and III to be completed by Environmental Planning Function. Continue on separate sheets as necessary. Reference appropriate item number(s).

SECTION I - PROPOSER INFORMATION

1. TO (Environmental Planning Function) 375 CES/CEV	2. FROM (Proponent organization and functional address symbol) 375 OSS/DO	2a. TELEPHONE NO. 256-4493
--	--	-------------------------------

3. TITLE OF PROPOSED ACTION

Revision to the Scott/MidAmerica Joint Use Agreement

4. PURPOSE AND NEED FOR ACTION (Identify decision to be made and need date)

Revise/update existing Joint Use Agreement between the US Air Force and St. Clair County based on current use of the joint facility and to evolve the construction based original agreement into an operations based agreement—need date: 20 Mar 2004*

5. DESCRIPTION OF PROPOSED ACTION AND ALTERNATIVES (DOPAA) (Provide sufficient details for evaluation of the total action.)

The revised Joint Use Agreement must reflect the current air operations for the Scott/MidAmerica Airport and are captured in the 375AW Concept of Operations Letter dated 9 Oct 03. **

6. PROPOSER APPROVAL (Name and Grade) JAMES W. MOORE, Lt Col, USAF	6a. SIGNATURE 	6b. DATE 20040105
---	---	----------------------

SECTION II - PRELIMINARY ENVIRONMENTAL SURVEY. (Check appropriate box and describe potential environmental effects including cumulative effects.) (+ = positive effect; 0 = no effect; - = adverse effect; U = unknown effect)		+	0	-	U
7. AIR INSTALLATION COMPATIBLE USE ZONE/LAND USE (Noise, accident potential, encroachment, etc.)		X			Dev
8. AIR QUALITY (Emissions, attainment status, state implementation plan, etc.)		0			AMP
9. WATER RESOURCES (Quality, quantity, source, etc.)		✓			alt
10. SAFETY AND OCCUPATIONAL HEALTH (Asbestos/radiation/chemical exposure, explosives safety quantity-distance, bird/wildlife aircraft hazard, etc.)		0			CB
11. HAZARDOUS MATERIALS/WASTE (Use/storage/generation, solid waste, etc.)		✓			HAZ
12. BIOLOGICAL RESOURCES (Wetlands/floodplains, threatened or endangered species, etc.) <i>Additional information needed</i>		✓			AMR
13. CULTURAL RESOURCES (Native American burial sites, archaeological, historical, etc.) <i>Additional information needed</i>		✓			AMR
14. GEOLOGY AND SOILS (Topography, minerals, geothermal, Installation Restoration Program, seismicity, etc.)		✓			GW
15. SOCIOECONOMIC (Employment/population projections, school and local fiscal impacts, etc.)		+			DEV
16. OTHER (Potential impacts not addressed above.)		NOT ENOUGH INFORMATION TO BE ABLE TO EVALUATE			

SECTION III - ENVIRONMENTAL ANALYSIS DETERMINATION

17. <input checked="" type="checkbox"/> PROPOSED ACTION QUALIFIES FOR CATEGORICAL EXCLUSION (CATEX) # <u>A2.3.7</u> ; OR PROPOSED ACTION DOES NOT QUALIFY FOR A CATEX; FURTHER ENVIRONMENTAL ANALYSIS IS REQUIRED.

18. REMARKS

AFI 32-7061 - A2.3.7 - Continuation or resumption of pre-existing actions, where there is no substantial change in existing conditions or existing land uses and where the actions were originally evaluated in accordance with applicable laws and regulations, and surrounding circumstances have not changed.

19. ENVIRONMENTAL PLANNING FUNCTION CERTIFICATION (Name and Grade) Paul Schmidt/CS-13	19a. SIGNATURE 	19b. DATE 1APR04
--	--	---------------------

* The request for Environmental Impact Analysis stems from a revision of the 1989 Joint Use Agreement between the Air Force and St. Clair County Illinois. The progress in completing a new Joint Use Agreement is being monitored by SAF/IEI and AMC/XP and completion of the analysis is required prior to completion of the new agreement. The 20 Mar 2004 need date allows for 30-day comment period and the remainder for contracting the study and completing the analysis.

** The proposed action is to capture the environmental impact of the current use of the Scott/MidAmerica Airport by the 375 AW, 932 AW and 126 ARW. Alternatives to action are 1.) no action - runway use remains the same, and 2.) a return to the original description of operation restricting military operations to primarily the Scott runway and civilian operations to primarily the MidAmerica runway. The results of alternative 1 are uninterrupted/unfettered use of both runways for military operational and training necessity. Possible results include continued or increased noise levels in and around surrounding communities. Alternative 2 will result in a shift or increase of air traffic, both operational and training, to the Scott runway. This change would have an impact on noise generation in and around communities situated near or adjacent to the Scott runway.

REQUEST FOR ENVIRONMENTAL IMPACT ANALYSIS

Report Control Symbol
RCS:

INSTRUCTIONS: Section I to be completed by Proponent; Sections II and III to be completed by Environmental Planning Function. Continue on separate sheets as necessary. Reference appropriate item number(s).

SECTION I - PROPONENT INFORMATION

1. TO (Environmental Planning Function) 375 CES/CEV, 701 Hangar Rd, Scott AFB, IL 62225-5305 POC: Mr Carl Stoltz DSN:	2. FROM (Proponent organization and functional address symbol) 375 AW/CVJ, 101 Heritage Dr, Rm 31, Scott AFB, IL 62225-5305 POC: Lt Col Dan McKenzie	2a. TELEPHONE NO. DSN 576-5956
--	---	-----------------------------------

3. TITLE OF PROPOSED ACTION

Joint Use Agreement Re-Write for Scott AFB and St. Clair County/MidAmerica Airport

4. PURPOSE AND NEED FOR ACTION (Identify decision to be made and need date)

See Attached

5. DESCRIPTION OF PROPOSED ACTION AND ALTERNATIVES (DOPAA) (Provide sufficient details for evaluation of the total action.)

See Attached

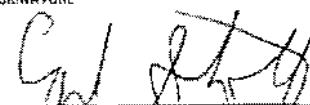
6. PROPONENT APPROVAL (Name and Grade) LEON A. STAMM, Colonel, USAF Director, Scott Joint Use	6a. SIGNATURE 	6b. DATE 11-18-99
SECTION II - PRELIMINARY ENVIRONMENTAL SURVEY (Check appropriate box and describe potential environmental effects including cumulative effects. (+ = positive effect; 0 = no effect; - = adverse effect; U = unknown effect)		
An AICUZ study has been funded for FY 2000. The study will encompass current operations.		
7. AIR INSTALLATION COMPATIBLE USE ZONE/LAND USE (noise, accident potential, encroachment, etc.)		
X		
8. AIR QUALITY (Emissions, attainment status, state implementation plan, etc.)		
X		
9. WATER RESOURCES (Quality, quantity, source, etc.)		
X		
10. SAFETY AND OCCUPATIONAL HEALTH (Asbestos/radiation/chemical exposure, explosives safety, quantity-distance, etc.)		
X		
11. HAZARDOUS MATERIALS/WASTE (use/storage/generation, solid waste, etc.)		
X		
12. BIOLOGICAL RESOURCES (Wetlands/woodlands, flora, fauna, etc.)		
X		
13. CULTURAL RESOURCES (Native American burial sites, archaeological, historical, etc.)		
X		
14. GEOLOGY AND SOILS (Topography, minerals, geothermal, Installation Restoration Program, seismicity, etc.)		
X		
15. SOCIOECONOMIC (employment/population projections, school and post fiscal impacts, etc.)		
X		
16. OTHER (Potential impacts not addressed above.)		
X		

SECTION III - ENVIRONMENTAL ANALYSIS DETERMINATION

17. <input checked="" type="checkbox"/> PROPOSED ACTION QUALIFIES FOR CATEGORICAL EXCLUSION (CATEX) #	A2.3.11	:08	per AFI 32-7061
PROPOSED ACTION DOES NOT QUALIFY FOR A CATEX; FURTHER ENVIRONMENTAL ANALYSIS IS REQUIRED.			

18. REMARKS

This action is not "regionally significant" and does not require a conformity determination in accordance with 40 CFR 93.153 (c) (1). The total emissions of criteria pollutants from the proposed action are below the deminimus thresholds and less than 10 percent of the Air Quality Region planning inventory. Our analysis indicates that there will be no direct, indirect, or cumulative environmental impacts with the action.

19. ENVIRONMENTAL PLANNING FUNCTION CERTIFICATION (Name and Grade) CARL R. STOLTZ, GM-13, DAF Flight Chief, Environmental Mgmt	19a. SIGNATURE 	19b. DATE 11/18/99
---	--	-----------------------

4. PURPOSE AND NEED FOR ACTION

4.1 Purpose of the Proposed Action. The Air Force and St. Clair County have determined that it is necessary to operate the runways and taxiways at Scott AFB and MidAmerica (SAFB/MAA) as a single facility under the complete control of the SAFB/MAA control tower. As construction at the SAFB/MAA nears completion, it is time to focus on the operational activities using both military and civilian facilities. The original agreement, signed in 1991, emphasized construction, but also stated how operations on the two runways were to take place. Under the current agreement, the airfield managers and air traffic controllers cannot efficiently control aircraft within the constraints of the current agreement. The reason is that under the current agreement safety matters intensify since the dual runways are near the Lambert Airport and Parks College airspace and traffic patterns. A new agreement, which focuses on operating, instead of constructing the facilities, would benefit the AF and County improving safety and making efficient use of resources. The close proximity of both runways and crossover taxiway allow for the 8000-foot Scott runway and the 10,000-foot MidAmerica runway to service the AF and the County. The new agreement would be long term, focusing on airfield operations with a 50-year perspective. The day-to-day operations would come under the direction of the control tower.

4.2 Need for the Proposed Action. The Secretary of the AF believes a new agreement is necessary to implement safe aircraft operations and maximize resources to achieve a single airfield operations concept or "Jointly Used Flying Facility" to enhance Air Mobility Command readiness. The concern for safety under the current agreement is over segregating air traffic to specific runways based on ownership. The runways lie adjacent to a very congested piece of airspace known as the "Troy Triangle" in the local aviation vernacular. The Troy Triangle is near the Troy VORTAC, Metro East airport, and Downtown Parks airport. Several important airways cross the area and serve as a primary arrival and departure gate for Lambert International Airport. Currently, military aircraft would primarily use the west runway and civil aircraft would primarily use the east runway. In addition, the Flight Operations Manual requires aircraft to operate over sparsely populated areas to reduce noise. By modifying the agreement, more control of where aircraft may operate would go to the control tower. Allowing the control tower to direct aircraft operations reduces airspace restrictions to the west and deconflict with Lambert and Parks airport arrival and departure corridors by moving clear of their traffic patterns. Giving the tower greater control allows aircraft operations to easily occur over the sparsely populated areas around SAFB/MAA as required by Air Force and Federal Aviation Administration (FAA) regulations, as well. The concept of a single airport entity ensures ready access to Air Force and County support facilities and avoids unnecessary expenditures of Air Force resources. Therefore, any rewrite of the agreement must permit the air traffic controllers the flexibility to direct traffic and determine the proper and safe management of the airspace and air operations in the SAFB/MAA area.

5. DESCRIPTION OF THE PROPOSED ACTION AND ALTERNATIVES

5.1 Description of the Proposed Action. The concept of operations is for military and civilian aircraft, for the most part, to operate separately with the military Aircraft using the Scott AFB runway and general aviation and commercial aviation using MidAmerica airport. However, pilot-training activities practicing landing and departure techniques would shift to the MidAmerica runway. Still, the final decision for which runway an aircraft would use for training or otherwise is with the air traffic control tower. Their determinations will come from standard safety and air traffic control procedures. All ground and air movements under the new agreement would come from the air traffic control tower. Civil aircraft would not use the Scott AFB flying facilities for pilot training. Commercial aircraft proficiency or certification flying for the County's tenants and customers would not be prohibited unless they interfere with military operational priorities, as determined in the sole discretion of control tower personnel.

5.1.1. The jointly used flying facilities are runways, taxiways, control tower, lighting systems on the runways, navigational aids, markings and appurtenances around the runways will go under the control of the SAFB/MAA Tower control personnel. All other facilities like the terminal buildings, hangars, parking aprons and ramps will remain separate and under the control of each owner.

5.1.2. Commercial aircraft proficiency or certification flying for MidAmerica tenants and customers may use the Scott runway on an availability base. General aviation pilot training is prohibited.

5.2 Decision that must be made. The decision for the Secretary of the AF and St. Clair County will be to operate the two facilities as a single airport entity, under the control of the air traffic control tower. The AF wants to enter a new agreement with St. Clair County to enhance flight operations at Scott. The approval would allow both facilities to become a "Jointly Used Flying Facility. The agreement would allow military and civilian aircraft to operate on both runways within the constraints of proper, safe, and efficient air traffic control. While under the control of the tower, the Scott AFB runway would generally serve as the primary runway for military arrival and departure operations. The MidAmerica runway would generally serve as the primary runway for civil aircraft arrival and departure operations.

5.3 Anticipated Environmental Issues. The environmental issues concerning the proposed action to combine the facilities under the Jointly Used Flying Facilities are: (a) Air Quality in the vicinity, and (b) Noise Contour changes created by aircraft using both runways. The analysis for the Jul 91 Environmental Impact Statement (EIS) to construct the Joint-Use facility looked at Air Quality and Noise Contours for aircraft using both runways. The studies in the EIS indicate that impacts from noise would be less by runway sharing. The air quality standards would remain under deminimus levels. The additional aircraft from the 126 Air Reserve Wing (ARW) moving from Chicago were analyzed under an Aug 96 Environmental Assessment (and a Conformity Determination prepared to determine compliance with Air Quality Regulations. Although not yet finalized, there is a potential for a KC-135 Flying Training Unit (FTU) to be added to the 126 ARW mission in Fiscal year 2002. However, there would be very little increase in flying hours beyond the current 3000 hours for the 126 ARW. Estimates are for possibly an

increase of up to 500 hours per year. Also, there may be an increase of one KC-135E aircraft in the future to help cover the current FTU mission. This is only in the discussion phase and a decision is yet to come. If the one aircraft comes to Scott, its operational time would be within the maximum 3500 hours the 126 ARW plans to use now. The traffic count totals at SAFB/MAA were 34,598 operations in 1998, and 21,470 operations through 30 Oct 99. Operations at both runways have yet to reach the numbers projected in the environmental documents. The MidAmerica facility does not have a commercial tenant at this time.

5.4 Selection Criteria. The proposed action must provide safe and expeditious air traffic control and airfield management services to military and civil aviators operating within the SAFB/MAA terminal airspace and on the airfield, in accordance with FAA Order 7110.65 and USAF requirements. Traffic pattern construction and runway utilization flexibility is essential to providing a safe and efficient service to the flying communities both civil and military.

5.5 Description of Alternatives.

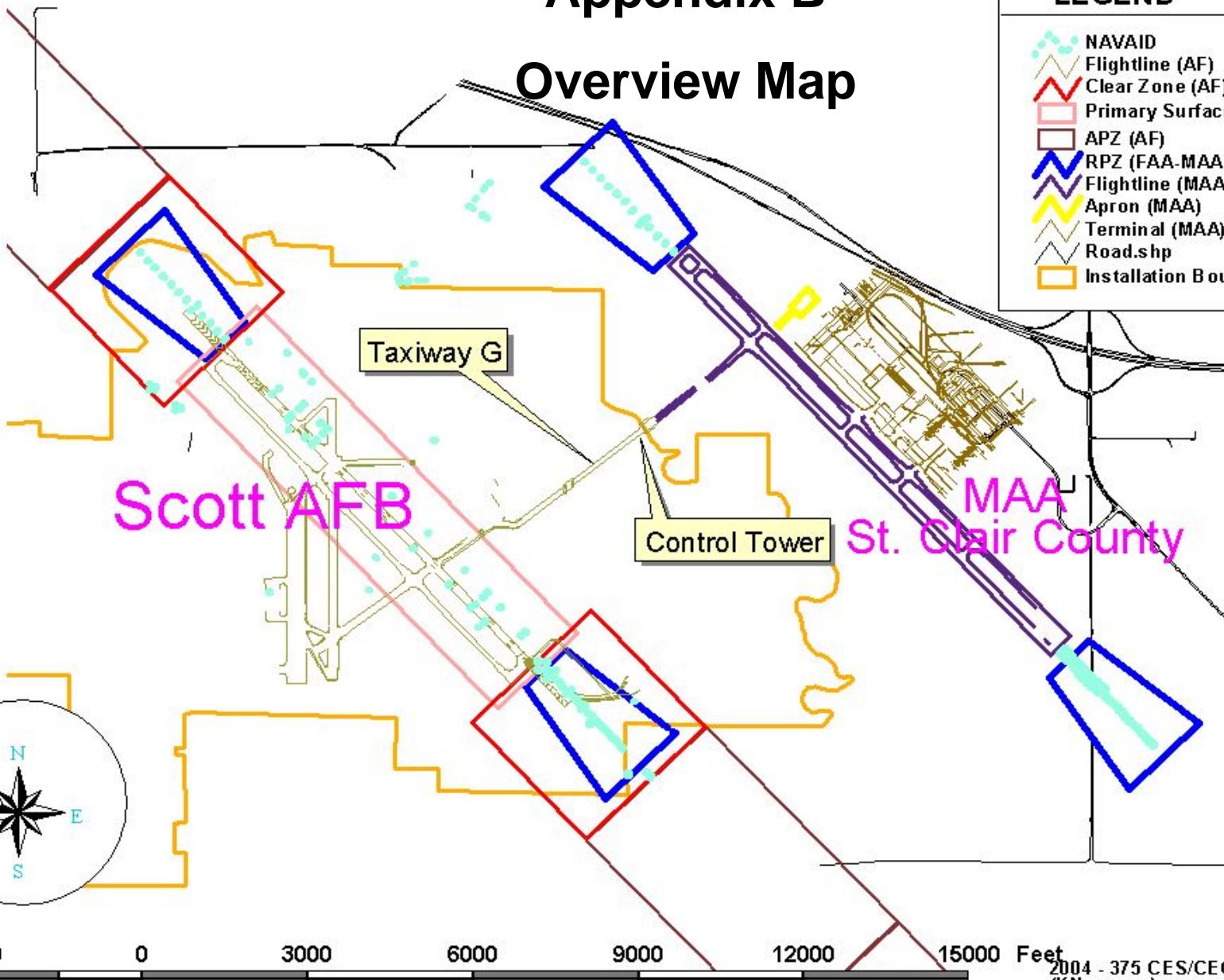
5.5.1 No Action Alternative. Under the No Action Alternative the facilities would operate, using the original concept of operations keeping most of the military and civilian aircraft separated. The air traffic control tower would separate aircraft on arrival or departure depending on ownership. No civil aircraft may use the military runway for training. ATC Tower personnel do not have flexibility to manage air traffic with best efficiency. Much of the military training would go off station to accomplish their training requirements. The areas closest are Alton IL, Springfield IL, Decatur IL, and Terre Haute IN. The radar pattern and congestion at these facilities are satisfactory for appropriate training.

5.5.2 Proposed Action Alternative. Enter into a new agreement that fully permits the control tower personnel to determine all aircraft movements within both operating areas as they best determine that movement, within Air Force and FAA guidelines and restrictions. The proposed action would do the same except shift the control of where aircraft depart and arrive to the air traffic control tower. Sound air traffic control principles require most of the training activities by military and civilian aircraft use the MidAmerica Airport runway.

APPENDIX B
Overview Map

Appendix B

Overview Map



APPENDIX C
Comments

Comments Matrix
 Final EA, FONSI for Joint Use Agreement Between
 St Clair County, and Scott Air Force Base, IL

ORG	Category/Reference/ Comment	Rational	Change	Resolution
AMC/JAV Teresa Hollingsworth Lt Col 229-0021	08/04/05 Pg. FONSI, ¶FONSI Critical - third line, change "considerable" impact to "significant impact"			Text modified
AMC/JAV Teresa Hollingsworth Lt Col 229-0021	08/04/05 Pg. FONSI, ¶REL between short/Long term... Administrative - Suggest changing to read: "Implementation of the Proposed Action will have a positive impact on long-term productivity by providing a comprehensive agreement to provide for safe and efficient civilian and military flight operations at Scott AFB and MidAmerica Airport."			Text modified
AMC/JAV Teresa Hollingsworth Lt Col 229-0021	08/04/05 Pg. FONSI, ¶Add this Administrative - I suggest adding a paragraph on Airspace/Airfield Operations and Safety to capture the positive effects of using the runways consistent with the radar traffic pattern.			Text modified
AMC/JAV Teresa Hollingsworth Lt Col 229-0021	08/04/05 Pg. FONSI, ¶Ordnance Administrative - Delete this para as this info does not appear in the EA			Text modified
AMC/JAV Teresa Hollingsworth Lt Col	08/04/05 Pg. FONSI, ¶Noise Administrative - Suggest this instead of what's there: "Because the terms of the new JUA will allow a ten percent			Text modified

229-0021	increase in KC-135 operations (I'm getting that from para 4.3.2.1), some noise impacts will occur as a result of implementing the proposed action. However, the impact of noise generated from additional daily operational activities will be negligible."			
AMC/JAV Teresa Hollingsworth Lt Col 229-0021	08/04/05 Pg. 4-7, ¶4.10.2 Substantial - This para is inaccurate as written. The no action alternative would result in what is happening now, flying under an obsolete agreement. It would not require a change in ops. We need to find a way to say that the impact of No Action would be negative because we would not have new terms in the JUA, agreed upon by both parties, that accurately reflect current flying operations, spell out responsibilities, and address duties and obligations in a meaningful way.			Text modified
AMC/JAV Teresa Hollingsworth Lt Col 229-0021	08/04/05 Pg. 4-5, ¶4.4.1 Administrative - Delete the first sentence, "The use of hazardous materials under the Proposed Action or Alternative A is unlikely to impact worker health and safety."	The second sentence is sufficient alone.		Text modified
AMC/JAV Teresa Hollingsworth Lt Col 229-0021	08/04/05 Pg. 4-1, ¶4.1 Administrative - First para, third line, change "implementation of a new JUA" to "implementation of a revised JUA" First para, fourth line, change, "alternative would require" to "alternative would result in" 2nd para, 3d line, change "no impact to			Text modified

	environmental issues," to "no environmental impact," Third para, delete the sentence, "The following descriptions are brief and do not cover all aspects of the terminology."			
AMC/JAV Teresa Hollingsworth Lt Col 229-0021	08/04/05 Pg. 3-15, ¶3.7 Administrative - second para, third line, covers should be "cover"			Text modified
AMC/JAV Teresa Hollingsworth Lt Col 229-0021	08/04/05 Pg. 3-7, ¶3.3.2 Administrative - Change heading to "Noise Levels and the Public"			Text modified
AMC/JAV Teresa Hollingsworth Lt Col 229-0021	08/04/05 Pg. 2-2, ¶2.5 Administrative - Suggest replacing "more accurately reflects" with "more effectively manages" and inserting "operational" between "future" and "conditions."			Text modified
AMC/JAV Teresa Hollingsworth Lt Col 229-0021	08/04/05 Pg. 2-2, ¶2.4 Substantial - I suggest deleting what is currently written in para 2.4 and just saying there are no past or reasonably foreseeable future actions that will cause cumulative impacts.	The info that is here is really not on point as far as describing activities that, taken together with the proposed action, will cause even more impact to the environment. Also, as written, it is inconsistent with para 4.14.1		Text modified
AMC/JAV Teresa Hollingsworth Lt Col 229-0021	08/04/05 Pg. 2-1, ¶2.3 Administrative - Under No-Action Alternative, I suggest the following rewrite: "This alternative consists of not renewing the outdated and obsolete provisions of the 1991 JUA between the USAF and St. Clair County."	This better contrasts the proposed action (new agreement) with no action (no new agreement)		Text modified

AMC/JAV Teresa Hollingsworth Lt Col 229-0021	08/04/05 Pg. 1-5, ¶1.5 Substantial - Under No-Action Alternative, I suggest the following instead of what is there now: "Implementation of this alternative would result in the 1991 JUA provisions not being modified. Although the 1991 agreement allows for reciprocal operations at either runway, it does not contain provisions for substantial military operations at MidAmerica Airport, and therefore does not accurately reflect or effectively manage current operations."	The no action alternative would not require ops to change, it would just mean we don't have a new agreement.		Text modified
AMC/JAV Hollingsworth Lt Col 229-0021	08/04/05 Pg. 1-4, ¶1.5 Administrative - under Proposed Action, I suggest this instead of what is there now: "The Proposed Action consists of implementing the renewed JUA which contains modified provisions to more effectively manage the existing operational conditions at Scott AFB and MidAmerica Airport."			Text modified
AMC/JAV Teresa Hollingsworth Lt Col 229-0021	08/04/05 Pg. 1-1, ¶1.2 Administrative - I suggest re-writing the first sentence to read, "The primary need for implementation of the Proposed Action is to renew the 1991 JUA by including provisions that more effectively manage the current operational needs of the military and St. Clair County."			Text modified
AMC/JAV Teresa Hollingsworth	08/04/05 Pg. ES-1, ¶Exec Summary Administrative - Last para on the page beginning with "The purpose of	This shows the action we're taking -- to get an approved agreement that is modified		Text modified

Lt Col 229-0021	renewing the JUA..." in the second line, I suggest changing "renewed agreement" to "modified agreement"	to fit current operating conditions. "Renewed" really doesn't tell the reader anything except the agreement is going to cover an additional period of time.		
AMC/JAV Teresa Hollingsworth Lt Col 229-0021	08/04/05 Pg. Final EA, ¶TOC Administrative - Rename para 3.3.2 from Existing Conditions to "Noise Levels and The Public"	This para doesn't really discuss current conditions but is a more general expalnation of the effect of noise on the public		Text modified
AMC/JAV Teresa Hollingsworth Lt Col 229-0021	08/04/05 Pg. final EA, ¶TOC Administrative - Fix all page numbers on table of contents			Correction made

**FINDING OF NO SIGNIFICANT IMPACT TO THE
IMPLEMENTATION OF A REVISED JOINT USE AGREEMENT AT
SCOTT AIR FORCE BASE, ILLINOIS**

Agency: United States Air Force, Headquarters, Air Mobility Command

Background: Pursuant to the President's Council on Environmental Quality (CEQ) regulations, {Title 40 Code of Federal Regulations (CFR) Parts 1500-1508}, the NEPA of 1969 {42 U.S.C. §4321, et seq.}, Air Force Instruction (AFI) 32-7061, and the Environmental Impact Analysis Process, as promulgated at 32 CFR Part 989, the U.S. Air Force conducted an EA of the potential consequences associated with the implementation of a Revised Joint Use Agreement at Scott AFB, IL. The EA considered all potential natural resources, environmental, and cultural impacts of the Joint Use Agreement (hereinafter, "Proposed Action") between St. Clair County and the U.S. Air Force and listed alternatives, both as solitary actions and in conjunction with other proposed activities. This FONSI summarizes the results of this EA and provides the U.S. Air Force's rationale for the Proposed Action and alternatives.

PROPOSED ACTION: The Proposed Action is to renew the 1991 JUA to more accurately reflect the current operational needs of the military and St. Clair County.

Alternatives: Alternatives to the Proposed Action are the No-Action Alternative and Alternative A. Implementation of the No-Action Alternative will leave in place an outdated Joint Use Agreement that does not adequately reflect current conditions at Scott AFB/MidAmerica Airport. Implementation of Alternative A limits the choices available to military and civilian pilots during periods of less than ideal flying conditions and creates potential safety issues.

Cultural and Historical Resources: No construction activities will result from the implementation of the Proposed Action. Therefore, no impacts will occur to cultural and historical resources.

Air Quality: No new emissions are expected to result from implementation of the Proposed Action. Therefore, the Proposed Action will not increase emissions over baseline emission levels. The Proposed Action will be in compliance with all relevant requirements and milestones contained in the Illinois State Implementation Plan; therefore, a conformity determination will not be necessary.

Hazardous Materials and Waste and Stored Fuels: No new hazardous materials are expected to be produced or used due to implementation of the Proposed Action. Therefore, there will be no anticipated impact to human health or the environment as a result of implementation of the Proposed Action.

Noise: Because the terms of the new JUA will allow a ten percent increase in KC-135 operations, some noise impacts will occur as a result of implementing the proposed action. However, the impact of noise generated from additional daily operational activities will be negligible.

Geology and Soils: No construction activities will result from the implementation of the Proposed Action. Therefore, no impacts will occur to geology and soil resources.

Water Resources: There will be no significant impacts to surface or groundwater quality, floodplains or wetlands upon implementation of the Proposed Action.

Biological Resources: Because no land disturbance will be conducted and anticipated noise levels are below levels considered to be harmful to wildlife, no biological resources, including endangered or threatened species, or rare fauna and flora will be impacted by the implementation of the Proposed Action.

Airspace/Airfield Operations and Safety: Implementation of the Proposed Action would have a positive impact upon airspace/airfield operations and safety. The Proposed Action would allow the use of the longer MidAmerica Airport runway when required by mission parameters or weather conditions.

Environmental Justice: There will be no disproportionately high or adverse impact on minority or low-income populations as a result of the Proposed Action.

Indirect and Cumulative Impacts: No impacts are anticipated from site-specific, direct, indirect, or cumulative impacts associated with the Proposed Action.

Relationship Between Short-term Uses and Enhancement of Long-Term Productivity: Implementation of the Proposed Action will have a positive impact on long-term productivity by providing a comprehensive agreement to provide for safe and efficient civilian and military flight operations at Scott AFB and MidAmerica Airport

Irreversible and Irretrievable Commitment of Resources: There will be no irreversible and irretrievable commitment of resources if the Proposed Action were selected.

Unavoidable Adverse Impacts: There will be no major unavoidable adverse impacts associated with the Proposed Action.

FINDING OF NO SIGNIFICANT IMPACT: Based upon my review of the facts and analyses contained in the attached Environmental Assessment for the Joint Use Agreement dated August 2005, I conclude that implementation of the Proposed Action will not have a significant impact, either by itself or cumulatively with other projects at Scott AFB. Accordingly, the requirements of NEPA, the CEQ regulations, and 32 CFR 989 are fulfilled and an Environmental Impact Statement is not required. The signing of this Finding of No Significant Impact completes the environmental impact analysis process under Air Force Regulations.

RICHARD A. KLUMPP, JR., Colonel, USAF
Vice Commander

Date

Attachment:
Environmental Assessment